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ABSTRACT

The study investigated the use of repeated writings as a means of increasing written language fluency with 48 learning disabled students in senior high school resource room English classes. Subjects received one of four treatments for 4 days: repeated writing with structural cues, repeated revision with structural cues, writing on a new topic with structural cues, and writing on a new topic with mechanics cues. Final compositions produced on day 5 were analyzed for fluency, writing mechanics, and paragraph structure. Analysis of variance for fluency factors revealed that all groups showed significant improvement from pretest to posttest on the production factor; analysis for mechanics and structure factors indicated that students receiving instruction in writing mechanics made significantly more progress than students receiving instruction in paragraph structure. Non-parametric tests on structural variables showed significant changes for use of clincher sentences for students receiving both mechanics and structural instruction. No significant differences existed among the four groups at posttest for use of topic or clincher sentences at posttest. Results suggested that highly structured daily writing sessions can be effective in improving writing fluency, mechanics, and structure. Instruction in writing mechanics, appeared to have a more pervasive effect on writing skills than instruction in paragraph structure. Thirteen tables, 10 figures, and 10 pages of references are provided. Appendixes comprising 50 pages include directions for experiental groups and scripts for mechanics cue and structural cue instruction. (DB)

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The Effects of Repeated Writing and Repeated Revision Strategies on Composing Fluency of Learning Disabled Adolescents

FINAL REPORT

Project # PR 023 BH 50011

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ABSTRACT

This study investigated the use of repeated writings as a means of increasing written language fluency. LD students (N = 48) in senior high Resource Room English classes were randomly assigned to one of four instructional conditions: repeated writing with structural cues, repeated revision with structural cues, writing on a new topic with structural cues, and writing on a new topic with mechanics cues. Students in the repeated writing and repeated revision groups (n=12) wrote about the same assigned topic on four consecutive days and received videotaped instruction in paragraph structure each day. Revision students revised and copied the previous day's draft, but repeated writing students started fresh each day. Students in the new topics groups (n=12) were assigned a new topic to write about daily and either viewed videotaped instruction in writing mechanics or paragraph structure.

The final compositions produced on day five were analyzed for 16 measures of fluency and 10 measures of writing mechanics and paragraph structure. The resulting dataset was reduced by means of factor analysis. An analysis of variance for fluency factors revealed that students showed significant improvement from pre-test to post-test on the production factor. An analysis of variance for mechanics and structure factors indicated that students receiving instruction in writing mechanics made significantly more progress from pre-test to post-test than students receiving instruction in paragraph structure. Non-parametric tests on structural variables showed significant changes for use of clincher sentences from pre-test to post-test for students receiving mechanics instruction as well as those receiving structural instruction. However, no significant differences existed among the four groups for use of topic or clincher sentences at post-test. The author concludes that highly structured, daily writing sessions can produce improvements in writing fluency, mechanics, and structure for LD high school students through writing on the same or different topics. Furthermore, instruction in writing mechanics, at least initially in the context of such a program, may have a more pervasive effect on writing skills than instruction in paragraph structure.

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Alterations in Proposed Research Procedures

Several alterations were made in the proposed research procedures prior to implementation of the study. They included modifications in the independent and dependent variables and sampling procedures.

Independent Variable

Originally, three experimental groups were proposed: repeated writing, repeated revision, and writing on different topics. The proposed study would have allowed only for comparison of changes in fluency measures by writing process. However, it was decided to add an instructional variable to enhance the effects of the writing processes and provide findings more specifically relevant to classroom practices. The addition of the instructional variable was particularly important because of the short length of intervention (one, five-day, rewriting cycle). The two forms of instruction that were provided were based on current research findings and pedagogy in composition instruction. (See Chapter 2 of the Final Report.) As a result, four experimental groups rather than three provided the opportunity to compare repeated writing with instruction in paragraph stucture, repeated revision with instruction in paragraph structure, writing on different topics with instruction in paragraph structure, and writing on different topics with instruction in mechanics.

Dependent Variable

In the original proposal, only two dependent measures were selected: length of T-unit and number of T-units. Because of the increased complexity of the intervention due to the addition of the two methods of instruction, it was decided to monitor more dependent variables. A computerized analysis program (CLAS) was selected that provided sixteen fluency measures, including the two originally proposed. In addition, ten dependent measures that directly measured the language characteristics emphasized in the two types of instruction were added.

Sampling

The addition of the instructional components precluded one teacher directing the activities of students assigned to different experimental conditions simultaneously. Therefore, in order to maintain true randomization, it was necessary to find a school where multiple classes were available in one academic period and could be randomly reassigned to the four experimental groups for the the duration of the experiment. As no schools with multiple Resource English classes per period were available within the districts who had already agreed to participate, it was necessary to travel to the metropolitan area of

Philadelphia to obtain subjects.

Chapter I

INTRODUCTION

It has been well documented that LD (learning disabled) students are frequently deficient in writing fluency (Anderson, 1982; Deno, Marston & Mirkin, 1982, and Moran, 1981). This is particularly a handicap at the secondary level because comprehension of content-area knowledge is often evaluated through responses written in sentence and paragraph format. In addition, compositions and a variety of other writing tasks are required for successful completion of a yearly English course, mandatory for a high-school diploma. Thus, a secondary LD student's achievement in a variety of content-area subjects as well as English may be hampered by a writing deficit.

Writing instruction at the secondary level is also of particular concern because students appear to plateau in skills aquisition at that age level (NAEP, 1975). For LD students this factor is often compounded by the effect of cumulative educational deficit, a deficit between the achievement levels of LD and normal students that usually increases with age. For example, the overall scores of LD students on the Test of Written Language were shown to decline between grade 3 and grade 7 as compared to those of their nonLD peers. At the seventh-grade level, for the first time, LD's scores were more than one standard deviation below those of their peers (Poplin, Gray, Larsen, Banikowski, & Mehring, 1980).

Writing is a complex skill that can be operationally delineated in a variety of ways. However, fluency is one characteristic that has emerged as a primary dependent variable in composition studies. Fluency includes the accuracy and rate of written-language production. The most frequently cited indicators of fluency are simple production measures such as total number of words per composition. However, many vocabulary and syntax measures are valuable indicators of fluency as well (Moran, 1981).

Previous studies have correlated various fluency measures with quality ratings assigned by independent raters. However, the results have varied across studies, ages, handicapping conditions, and types of writing tasks, due in part to the fact that differing combinations of variables were investigated in each study (Dilworth, Reising & Wolfe, 1978; Nodine, Barenbaum & Newcomer, 1985; and Stewart & Leaman, 1983). Computerized composition analyses now make it possible to monitor many fluency measures simultaneously. For example the CLAS

(Computerized Language Analysis System) program provides individual or aggregate datasets for a comprehensive array of fluency variables.

Statement of Problem

Several methods have been reported for teaching written language and increasing fluency, including feedback on writing mechanics [Lovitt & Hansen, 1973 (cited in Hansen, 1978b)], a structural learning strategy (Moran, Schumaker & Vetter, 1981), instruction for increasing fluency (Kraetsch, 1981) and revision (Hansen, 1978a & Stires, 1984). Although these treatments have produced effects for certain students, no attempt has been made to systematically evaluate their relative effectiveness with LD adolescents. Also, the relative effects of these interventions upon different dependent variables is unclear. The purpose of this study is to compare the effects of four instructional conditions (different topics with mechanics cues, different topics with structural cues, repeated writing with structural cues, and repeated revision with structural cues) on the fluency, mechanics, and structure of writing by LD, secondary students.

Chapter 2

REVIEW OF THE LITERATURE

This chapter first: provides an overview of the literature base relevant to learning-disabled (LD) adolescents and written language instruction; discusses the literature pertaining to the processes of repeated writing, revision, and writing on different topics; and reviews previous studies of composition instruction focusing on the mechanics as compared to the structure and content of language. Second, measurement of written language is briefly discussed and research pertinent to selection of dependent variables is reviewed.

Background

The professional literature concerning LD students and written language skills consists largely of descriptive studies to document the presence of a problem (Anderson, 1982; Deno, Marston & Mirkin, 1982; Hermreck, 1979; Moran, 1981; Morris & Crump, 1982; Myklebust, 1973; Nodine, Barenbaum & Newcomer, 1985; Poplin, Gray, Larsen, Banikowski & Mehring, 1980; and Poteet, 1979). Research at the University of Kansas Institute for Research in Learning Disabilities suggests that the only significantly different aspect of the writing of low achievers and LD students is the number of spelling errors (Moran, 1981). Both low-ahcieving and learning disabled students made many more mechanics errors (such as sentence structure, usage, and spelling) than did high achievers. However, when syntactic complexity was examined through percentage of independent and dependent clauses per T-unit, performance of LD students was comparable to that of normal students. Production is a skill area in which handicapped students are frequently identified as deficient, both in oral (Parker & Berryman, 1981) and written skills (Hermreck, 1979; Myklebust, 1973; and Poteet, 1978). Production is usually regarded as a prerequisite to development of higher-level writing skills and thus very important for aquisition of composition skill at the high school level. Although these descriptive studies may suggest skill areas that should be priorities for instruction, direct implications for selection of an instructional approach cannot be drawn.

Studies have also been reported in which a particular intervention to improve writing skills was implemented (Brigham, Graubard & Stans, 1972; Harris & Graham, 1985; Kraetsch, 1982; Hansen & Lovitt, cited by Hansen, 1978b; and Moran, Schumaker & Vetter, 1981). These studies (analyzed later in this chapter) have a variety of limitations that restrict their usefulness for comparing instructional approaches. They usually were tested with a very small number of students, for a relatively short period of time (two months or less), by means of single-subject designs. Although they do offer valuable information as to components and procedures that should be considered in designing instrucitonal programs for research purposes, the generalizibility of these studies is limited. Because of these short-comings, literature beyond that dealing directly with writing interventions and LD students had to be considered.

Only a few of the studies reviewed included learning-disabled students exclusively; most studies included heterogenous groups of students, and some distinguished good writers from poor writers based on competence ratings on a criterian task. Thus, incorporating studies with non-LD students can be justified on several grounds. First, research by Ysseldyke and his colleagues at the University of Minnesota Institute for Research in Learning Disabilities has revealed the unreliability of the LD classification (Ysseldyke & Algozzine, 1983). Second, prior to 1975 many students with learning disabilities were not classified. Therefore, studies completed before that date in regular education settings most likely included such students. Furthermore, even following the passage of PL 94-142, LD students at the secondary level have most often been educated in regular classrooms, even for academic classes requiring composition skills. For these reasons studies of non-LD students and writing instruction were also considered.

Instructional Approaches and Writing Processes

Approaches to teaching writing can be contrasted on three dimensions: the method of instructing (if direct teacher student instructing is provided), the content that is emphasized, and the writing processes that are typically involved in practice activities. Cobb Morocco & Newman (1985) observed elementary teachers giving writing instruction to LD students at the elementary level. They identified three general approaches (process approach, environmental approach, and skills approach) teachers follow that differ across these three dimensions. In a larger study of teachers of Freshman English at the college level, Hillocks (1984) identified many of the same distinctions among three approaches: non-directional approach, environmental approach and presentational approach. Regardless of the categorical labels that are used, it appears that contrasting methods of teaching writing, distinctive in philosophy and practices (as evident in the method, content, and process of instruction) are being used by classroom teachers.

The following section reviews pertinent aspects of the methods, content, and writing processes employed in writing instruction. The purpose of this review is to examine the evidence supporting various instructional practices inherent within different approaches. First, elements of the method of instruction are discussed, including the use of reinforcement and monitoring. Next, the content of instruction is covered including emphasis on mechanics and structure. And finally, the writing processes employed to foster improvement are examined, including revision and repeated writing.

Method of Instruction

A substantial body of literature supporting the use of a "direct instruction" approach can be identified. Written-language instruction does not seem to be unique in terms of the instructional components that produce significant (and as a rule, relatively prompt) changes in performance. Rosenshine (1983) has identified a set of recommended procedures for effective instruction, founded upon basic behavioral principles, that appear to apply to writing as well as other subjects. They include use of direct teacher instruction including modeling and guided practice, systematic use of reinforcement, corrective feedback, daily review of previously learned material, and opportunities for self-monitoring. Various combinations of these instructional components have been investigated for improving production and higher level written language skills such as paragraph organization and creativity. Interventions empirically demonstrated to be effective in increasing written language production have consistently contained many of the elements of instruction cited by Rosenshine. Two of those elements seem to be particularly pervasive and powerful: systematic reinforcement and systematic feedback.

Reinforcement

Brigham, Graubard, and Stans (1972) investigated the use of a "sequentially additive contingencies" reinforcement system with 13 students in a fifth grade special class through a modified multiple-baseline design. The number of points students received was contingent first upon just working during the writing period, then upon the number of words written, then the number of different words used, and lastly upon the number of new words not used in previous compositions. Students' writing on assigned topics improved over two to four sessions in all reinforcement conditions, but performance changed the most during the number of words written contingency phase.

Maloney and Hopkins (1973) used a similar procedure and design in a study of written language with 14 students grades 4-6. Students first received reinforcement contingent on participation, then for the number of different adjectives used, then for the number of different action verbs, and lastly for the number of different adjectives, action verbs, and sentence beginnings. The number of sentences written (10) was a fixed requirement. The number of letters and words produced remained stable across conditions. All target skills improved during all reinforcement phases. The targeted contingency skill improved significantly during each phase, although the high level of performance was not maintained in successive contingency conditions.

Ballard and Glynn (1975) also used a multiple-baseline design to investigate the use of self-recording on a similar set of composition components. Fourteen third-grade students alternated between baseline (self-monitoring only) and intervention (self-monitoring and self-reinforcement) phases. During intervention phases self-reinforcement was contingent on production of target composition components. Self-monitoring alone had no effect on the students' production, but, as in Maloney and Hopkin's study, production of target composition components increased significantly during contingent reinforcement phases. Reinforcement for the number of sentences written had the greatest effect on production of all monitored components (number of sentences, different action words, and descriptive words) as well as one of the highest time-on-task rates.

Campbell and Willis (1979) demonstrated that even creative characteristics of writing production can be modified through reinforcement. Twenty-minute compositions by 26 normal fifth graders were rated on Torrence's measures of creativity: flexibility, fluency, elaboration and originality. Reinforcement for creative score and improvement in the targeted creative composition characteristics resulted in a 72% increase in scores from baseline. Scores in the second baseline interval were only slightly lower than in intervention, but reflected a downward trend. A follow-up phase providing intermittent reinforcement resulted in maintenance of a 67% increase in creativity scores from the initial baseline level.

Feedback Procedures

The effects of reinforcement appear to be enhanced when immediate feedback on target behaviors is provided through self-scoring. Van Houten, Morrison, Jarvis, and MacDonald (1974) had 55 second and fifth-graders write for a 10-minute period. During baseline students were told only to write as much as they could; during intervention students were told to try to beat their own best record (for number of words written) which had been posted in the front of the classroom and to count and record their score at the conclusion of each session. Production doubled during intervention phases.

Van Houten and MacLellan (1981) measured writing producton of 54 eleventh-graders by number of thematic units produced per five-minute composition. [A thematic unit (T-unit) consists of an independent clause accompanied by any number of dependent clauses; it is the minimal part of a sentence that could stand alone (Hunt, 1965).] Three different interventions were used, feedback (including self-scoring and posting of highest scores), instruction in sentence combining, and a combination of feedback and sentence combining instruction. Instruction in sentence combining alone had no significant effect on T-unit production; however, feedback and self-recording did. The most powerful intervention was the combined use of sentence-combining instruction and a feedback component that included self-scoring and public posting of scores.

Systematic feedback can also be delivered in the context of prompting. Schloss, Harriman, and Pfeifer (1985) investigated the use of a systematic prompt reduction strategy to increase writing production of three students in a junior-high school, self-contained class for the emotionally disturbed. By providing increasingly specific prompts every 20 seconds until a sentence was generated, the teacher increased independence in the students' abilities to generate sentences. Concurrently, the amount and quality of language produced increased significantly.

In a study with secondary LD students (N=48), the effects of the same systematic prompting procedure were compared to the effects of a random prompting procedure (Harriman, 1985). Various monitoring conditions were also investigated. Mean differences on the post-test favored the systematic prompting with self-monitoring of prompts and production group. However, no significant differences were identified between systematic and random prompting conditions.

In summary, specific performance feedback appears to provide students with a vehicle for self-monitoring that in turn enhances their response to instructional interventions. In particular, feedback seems to enhance the effects of reinforcement contingent on specific elements of written language. Effective use of monitoring and contingent feedback also appears to be facilitated by specific instruction and demonstration of target language elements during each writing session.

Unfortunately, dependence on external reinforcement systems may be undesirable or impractical in secondary school settings (Deschler, Schumaker, & Lenz, 1984). Teachers may not have access to meaningful reinforcers (they may require consistent participation of significant others, be too costly, or be too time-consuming). In addition, a fundamental goal of secondary LD programs is for students to become more independent and rely less on structure imposed by their teachers (Deschler, Warner, Schumaker, Alley, & Clark, 1983). Therefore, a need exists to evaluate some of the other instructional components employed in these studies with LD adolescents in the absence of contingent reinforcement.

Content of Instruction

In regard to the content of instruction, there is less empirical research available and evidence of considerable controversy among experts as to whether the mechanics, content, or structure of language should be emphasized. In most of the studies discussed in the previous section the instruction focused on discrete elements of language that could be readily counted or measured. Critics claim that the most important aspect of composing, to communicate meaning, is overlooked in such instruction (Squire, 1985 and Calkins, 1986). Roit and McKenzie (1985) call for more conceptually oriented content and express the concern that by "continuing to assume that ... mastery must be attained at each of the 'lower' stages, the learning disabled student may forever have his potential for growth in written language confined to good spelling and clear handwriting instead of meaningful thought." (p. 258).

One of the instructional approaches identified by Cobb Morocco and Newman (1985), the process approach, emphasizes the expression of the student's ideas. The content of instruction is focused around the meaning inherent in a particular composition and how to use language to communicate it to others. Cobb Morocco and Newman contrast this approach with the skills approach, in which the content is focused on predetermined sequences of discrete skills related to the mechanics and organization of language.

Lovitt and Hansen (1973, cited by Hansen, 1978) compared the effects of feedback on mechanics, feedback on content, and a combination of the two. Seven students, ages 9 to 11, were assigned to two experimental groups and participated in daily, 10-minute writing sessions for 10 weeks. The investigation included a baseline phase (during which no instruction, feedback, or reinforcement was provided), followed by a first intervention phase (during which feedback on either mechanics or content was provided), and concluded with a second intervention phase (during which feedback on both mechanics and content was provided). The amount of feedback was held constant, with three positive and three negative comments administered per composition. Dependent measures reflecting fluency (including production and vocabulary) as well as mechanics (including punctuation and capitalization) were charted. Hansen and Lovitt concluded that feedback on mechanics had more effect than feedback on content in improving both mechanics and content.

Moran, Schumaker and Vetter (1981) have reported the results of two studies in which a paragraph-writing strategy developed at the University of Kansas Institute for Research in Learning Disabilities was field-tested with secondary LD students. The procedure involved using a six-step model for strategy instruction to teach cues for structuring different styles of paragraphs. The content focused on the three cues: write a topic sentence, write detail sentences, and write a clincher sentence. The method of instruction included presenting a rationale, modeling, verbal rehearsal, and practice with corrective feedback. Mastery of 85 percent was required before proceeding to a new paragraph style.

In the first study, three junior-high students, with standardized test scores in written language skills ranging from 2.4 to 6.5, received instruction in the strategy for one academic period, twice a week, for six weeks. A multiple-baseline design (across paragraph styles) was used to evaluate the effectiveness of the instruction for individual students. All three students showed improvements in their scores on the three types of paragraphs; average gains ranged from 28 to 57 percent after an average of two to four trials for each type. Also, there was evidence of generalization of instruction among paragraph types. Unfortunately, only overall percentage of mastery scores are reported for each paragraph type, so it is impossible to evaluate students' relative gains on the structural subskills or other fluency variables.

In the second study, five junior and senior-high students received instruction in the strategy for two hours a day, three times a week, for four weeks. A multiple-baseline (across students) design was used to compare strategy mastery for a group of three students and then for another group of two students. All five students improved their overall paragraph scores an average of 38 to 56 percent. Scores on paragraph samples from the regular classroom provided evidence of generalization across settings, also, although no students met the 85 percent criterion for mastery in the mainstream.

In summary, at least two types of instructional content, instruction in mechanics and instruction in structure, appear to be effective in improving the fluency and structure of LD students' writing within the context of two specific and highly systematic programs. However, further study is necessary to verify the effects of such interventions with secondary, LD students. Also the effects of mechanics and structural content have not been investigated within the context of various writing processes.

Writing Processes

Writing processes produce the most discussion with the least empirical evidence. Therefore, particular attention must be paid to this dimension and developing a rationale for at least two approaches to it: revision and repeated writing.

According to Graves (1983), " 'Process' refers to everything a person does from the time he first contemplates the topic to the final moment when he completes the paper. Students can be lectured on the components of the process, but they still only know process by actually doing the writing, making words fulfill their intentions." (p. 250). Thus, one would expect the process approach to differ from others in the dimension of "practice". In this approach, teachers provide multiple opportunities to rework a particular composition and emphasize the continuous processes of evaluating, generating and revising (Hayes & Flower, 1980). The repeated opportunity to receive feedback and then improve a composition rather than receive a summative grade upon the first submission is one of the distinctive features of this approach (Bissex, 1982 and Graves, 1986).

Revision

Revision is frequently cited as one of the most important, but least well researched, aspects of writing (Somners, 1982). Graves (1983) refers to Calkins' work on revision that describes several stages of ability to revise: the first, simply rewriting the entire composition on another piece of paper; the second, making superficial mechanical revisions; and the last, complex reorganization or modification of content. At this last stage, children are able to use arrows, cross-outs, and other symbols to indicate variations in text made during revision. Stallard (1974) found that good twelth-grade writers made an average of 12.24 revisions per paper, most of which were single word changes.

An alternate framework is suggested by Bertram, Collins, Rubin, Genter, & Bolt, Baranek & Newman, Inc. (1983). They recommend analyzing revisions at the word, sentence, paragraph, and text levels. They suggest that novice writers continually need to focus so much attention on the lower levels that they never get to consider revisions at the text level.

Monahan (1984) found some support for that theory in a study of the revision strategies used by basic and competent twelth-grade writers (N=8). Students wrote one composition for a student audience and one for a teacher audience. Two one-hour sessions were provided per composition. Students were taught to use a "think-aloud" procedure designed to allow the investigator to collect accurate information on the reason for changes at the time they were made without interrupting the writer's chain of thought. Each revision in the transcribed think-aloud protocols was coded for the point of occurrence, purpose, and type. Monahan found that the competent writers (as rated by the Regents Competency Test and a pre-test writing sample prior to the study) made a wider range of revisions than their less competent peers. Also, the competent writers used an episodic strategy, in which a series of connected revisions were made whereas the less competent writers were more apt to make single, isolated revisions.

Hansen (1978a) compared the effects of feedback on mechanics and feedback combined with instruction in revising content and mechanics, in a study of freshman English students. The control group submitted a composition on a newly assigned topic each week, received feedback on mechanics, and then, outside of class, completed a "proofreading" checksheet indicating mechanics errors. The experimental group wrote on a new topic every other week and rewrote previous drafts of compositions on alternating weeks. Specific instruction was provided during class time in proofreading for mechanics as well as editing for structure and content. Students in both conditions made gains from pre-test to post-test over the eight week intervention in mechanics, organization, and overall ratings awarded compositions. However, the two groups did not differ significantly in amount of gain achieved in any area. Therefore, it appears that although it may be possible to identify some ways in which the revision strategies employed by competent and less competent writers differ, providing opportunities for revision in combination with instruction in revision strategies does not necessarily produce significant improvement in writing.

Perl (1979) suggested that one reason may be constraints imposed by the text itself, during and after its generation. In her observational study of revision strategies employed by unskilled college students (N=5), she found that the unskilled students often evidenced a lack of flexibility in working with the text. They did not accurately reread text they had produced and often perceived the message they had intended to convey rather than the print that actually appeared. Or, they realized that something was incorrect but could not identify what it was or how to fix it. They also had difficulty with perspective and assumed that readers would share the author's point of view. Furthermore, once a pattern had been established in a paper, they had difficulty redirecting ideas.

Repeated Writing

Perhaps one way to overcome the problems encountered by unskilled writers, such as those described by Perl, would be to provide multiple opportunities to write on the same topic without imposing the contraints of a previous draft. Although the notion of repeated writings has not been investigated in written language methodology, it has been demonstrated to be effective in reading.

Repeated Reading. In 1974, LaBerge and Samuels introduced a model of information processing to explain the development of reading fluency. The model described sequences of cognitive procedures that are followed to recognize and identify words. They suggested that proficient reading required automatic execution of these procedures, a level of learning that could be developed through repeated readings of the same passage.

Automaticity assumes certain tool skills and processes involved in reading can be overlearned to an extent that they can be carried out without requiring the reader's full attention. The tool skills and processes involved include scanning for recognizable units, identifying graphemes, making grapheme-phoneme associations, and making phoneme-semantic unit connections.

An assumption of the theory is that attentional capacity is limited, thus reducing the number of constraints on the attentional system at any given moment will maximize fluency in processing information. Therefore, if certain subskills or processes can be learned to the degree that they can be executed without requiring continuous focused attention, simultaneous processing of information at different levels may occur. According to LaBerge and Samuels (1974):

> the present theory proposes.. that attention can

> selectively activate codes at any level of the system not only at the deeper levels of meaning, but also at visual and auditory levels nearer the sensory surfaces. But the number of codes which can be simultaneously activated by outside stimuli independent of attention is assumed to be large, perhaps unlimited. (p. 295).

Over the last 12 years, the technique of repeated reading has been investigated in a variety of contexts (Amlund, Kardash & Kulhavy, 1986; Dahl, 1974; Gonzales & Elijah, 1979; Herman, 1985; O'Shea & Sindelar, 1982; and Spring, Blunder & Gatheral, 1981). Some studies have dealt specifically with applications for disabled readers (Carver & Hoffman, 1981, Fleisher, Jenkins & Pany, 1979, and Moyer, 1983). Most of the studies were well designed and provide empirical support for the contention that repeated reading does increase fluency (rate and speed) for a specific passage. There is also some evidence that the increases in fluency generalize to other passages of comparable difficulty. However, the effects on comprehension and analysis of content are less clear (Carver & Hoffman, 1981; Spring, Blunder & Gatheral, 1981).

Repeated Writing and Development. Descriptive research on the writing of young children suggests that repeated writing is a naturally occurring phenomena that stimulates development of writing fluency. Clay (1975) has described a set of principles that govern children's writing. The recurring principle refers to children's tendency to write a new letter or word over and over again on a page. This process may also be repeated over a number of days, and "may give practice which leads to habitual responses, executed smoothly and swiftly" (1975, p. 21). The recurring principle leads into the generating principle when the child realizes that letters or words "can recur in variable patterns" (1975, p.27) and the flexibility principle, when children realize that they can vary their forms.

Graves (1983) has described five stages of handwriting development that also relate directly to fluency. He described that overall evolution as a "journey from a highly conscious participation in the writing process to a time when the shaping of letters in words and sentences becomes automatic, " (p. 171). He emphasized the influence of time and topic on writing and recommended at least 20-minute composing periods.

Graves also discusses the importance of fluency, specifically, speed of handwriting, in achieving access to higher-level writing skills. Graves contends, as do several other authors (Bertram et al., 1983 ; Britton, 1975) that the physical act of writing itself is an important factor in the cognitive process of writing. Thus, students who have not developed adequate handwriting speed will not have equal access to content. Word-by-word writing prohibits the writer from fluent generation and recording of ideas. Descriptive data from Graves' research suggest a normative speed of 1.5 words per minute for beginning writers to 8-19 words per minute for 9 and 10-year-old children.

Comparative data for learning-disabled students are not available; however, the existence of perceptual-motor deficits that may hamper the composing efforts of such students has been documented (Bruinks & Bruinks, 1977; Demckla & Rudel, 1978 ; Gutezeit & Hampel, 1978).

Therefore, it appears that a theoretical basis exists for investigating the role of the repeated writing process in written language development. Studies that have investigated repeated reading strategies may provide useful information for planning an effective repeated writing strategy.

Measurement of Written Language Skills

It's apparent from comprehensive models of the writing process (Flower & Hayes, 1980; Gagne, 1985) and taxonomies of writing skills (Foley, 1976; Glatthorn,

1981) that composition is a very complex process involving motoric, cognitive, and language skills. Some of the skills involved can be readily and directly measured but others are less easily quantified and have traditionally been evaluated through highly inferential processes. This section reviews three types of evaluation procedures: holistic ratings, atomistic measures, and criterion scores.

Holistic Ratings

One approach to evaluating composition skill is to use "holistic" ratings (Cooper, 1977). This approach is widely utilized in standardized testing (Godshalk, Swineford & Coffman, 1966), research (Keech & Thomas, 1981; Stahlecker, 1981), and instruction (Irmscher, 1979; Judine, 1965; Lynch, 1982). Analytic scoring devices specifying subskills to be scored individually may be employed (Diedrich, 1974), but, more commonly, independent readers simply assign one overall rating to a composition. For research and evaluation purposes, multiple raters usually confer on their ratings of several sample compositions periodically throughout the rating process. Inter-rater reliability for holistic ratings as high as .90 has been reported (Cooper, 1977).

However, in a recent study of compositions by 94

10th-graders, Moss, Cole and Khampalikit (1982) reported a rate of agreement of .46 across raters and types of writing tasks. Thus, although a fairly high level of reliability may be achieved in some circumstances, maintaining consistency across writers, evaluators, and compositions may be a problem. Problems in attaining an acceptable level of reliability include differences in performance that are influenced by the assigned mode of writing, attitudes and amount of previous experience by the evaluator, and differing developmental levels among chidren. Moss, Cole & Khampalikit (1982) found that the correlation between holistic measures and atomistic measures tends to increase across grades 4, 7, and 10, suggesting that performance is somewhat associated with age.

Holistic ratings are considered to reflect the quality of the content to a greater extent than atomistic measures (Cooper, 1977). As such they may serve an important function in measurement and instruction. However, for research purposes they have two major disadvantages. First, they may lack adequate reliability, particularly for younger or lower functioning students. Second, they only provide a general indicator of composition quality and cannot be linked to specific aspects of the instructional content.

Atomistic Measures

A second approach to evaluating composition skill is to use atomistic measures such as frequency counts of discrete elements of language (Cooper, 1977). Computerization has provided ready access to an array of atomistic measures that are objective, quantifiable, and apparently moderately to highly correlated with holistic quality ratings.

Atomistic measures are particularly appropriate for indicators of general fluency such as production. Atomistic indices of production include number of words, number of sentences, and number of T-units per composition. Such measures have been found to be strong predictors of independent, qualitative ratings (Grobe, 1981; Roos, 1981; and Stewart & Leaman, 1983). Moss, Cole, and Khampalikit, 1982, report a correlation (corrected for attenuation) between holistic and atomistic scores of .75 at grade 10.

Other aspects of fluency, such as syntax and vocabulary can also be evaluated through atomistic measures (Cartwright, 1969). Type-token ratios that reflect diversity of vocabulary can be calculated by computer programs. Type-token ratios are based on the proportion of different vocabulary words (TYPES) to total words (TOKENS) in a particular composition. Research with oral language samples of young children has led some authors to question the reliability of type-token measures (Hess, Sefton & Landry, 1986). Developmental patterns and language sample length may have been limiting factors. However, research evaluating the reliability and utility of various type-token scores for analyzing compositions of LD adolescents is needed.

Atomistic measures of syntax include length, type, and number of clauses as well as length and number of T-units. T-units have been demonstrated to increase in length across grade levels (Hunt, 1965). Furthermore, Dilworth, Reising & Wolfe (1968) found that T-unit length increased in proportion to composition length in writing samples of college freshmen receiving high holistic ratings.

Atomistic measures have several advantages for assessing a skill area such as writing fluency. Atomistic scoring permits simultaneous scoring of several, specific elements of written language that are assumed to reflect the same general attribute. Moreover, the scoring procedures are objective ensuring reliability across samples and time.

Criterion Scores

Holistic ratings may provide a general impression of quality and atomistic measures may provide objective indices of particular elements of language. However, educational researchers have argued that neither may be sensitive to development of writing processes (Scannella, 1982) or sub-skills (McGill-Franzen, 1979) resulting from specific instruction. Therefore, criterion scores are proposed as a third means of evaluating written language.

Criterion scores are direct measures of skill attainment, based on behavioral objectives (Guerin & Maier, 1983). Criterion scores have been employed to measure a variety of written language skills for LD students including paragraph structure (Schumaker & Vetter, 1981) and content (Anderson, 1982). The disadvantages of criterion measures include lack of reliability data, limitations in generalization, and often labor intensive scoring procedures. However, they may be designed to reflect the content of a specific instructional intervention to a greater degree than holistic or atomistic scores do.

Summary

It appears that several approaches to writing instruction warrant further investigation for use with LD, secondary students. In terms of the method of instruction, highly structured lessons in combination with monitoring and reinforcement have been effective. However, further investigation of these elements without contingent reinforcement is needed. In terms of the content of instruction, previous research with LD students suggests emphasizing either mechanics or structure. Lastly, limited information exists regarding the effects of various writing processes such as repeated revision and repeated writing upon improvements in writing skills of LD students.

Purpose and Hypotheses

The purpose of this study was to examine the relative effects of four instructional conditions upon the writing fluency and sturcture of LD, high-school students by systematically controlling the instructional elements of method, content, and writing process. Specifically, this study sought to answer the following questions.

1. Does the writing fluency of LD students who have written on the same topic for five days differ from those who have written on different topics each day?

2. Does the writing fluency of LD students who have written a new composition on the same topic for five days differ from those who have revised and copied an earlier draft each day?

3. Does the writing fluency of LD students who are

taught structural cues differ from that of students who are taught mechanics cues?

4. Does the writing fluency of LD students who are taught structural cues differ among the conditions of different topics, same topics with repeated writing, and same topics with repeated revision?

5. Does the mechanics or structure of writing by LD students who are taught structural cues differ from that of students who are taught mechanics cues?

Hypotheses

The experimental questions were translated into the following null hypotheses. The hypotheses are organized into two groups: those pertaining to fluency variables and those pertaining to application of cues.

Fluency

1. There will be no differences in performance on measures of writing fluency among the four experimental groups.
2. There will be no differences in performance on measures of writing fluency from pre-test to post-test.
3. There will be no differences in performance among the three fluency factors.

Application of Cues

4. There will be no differences in performance on application of cues among the four experimental groups.

5. There will be no differences in scores for application of cues from pre-test to post-test.

6. There will be no differences among the three measures for application of cues.

7. There will be no differences among the experimental groups in the use of topic sentences in post-test compositions.

8. There will be no differences among the experimental groups in use of clincher sentences in post-test compositions.

9. There will be no differences between pre-test and post-test scores for the use of topic sentences by the groups who have been instructed in structural cues.

10. There will be no differences between pre-test and post-test scores for the use of topic sentences by the groups who have been instructed in mechanics cues.

11. There will be no differences between pre-test and post-test scores for the use of clincher sentences by the groups who were instructed in structural cues.

12. There will be no differences between pre-test and post-test scores for the use of clincher sentences by group that was instructed in mechanics cues.

Chapter III

METHODOLOGY

The purpose of this study was to determine the effects of four instructional conditions incorporating repeated writings on written language fluency of LD adolescents. An explanation of the methodology used is presented in the following order: overview, subjects, independent variables, dependent variables and procedures.

Overview

Forty-eight students in grades 7 through 12 classified as LD and placed in resource classes for English were randomly assigned to one of four instructional conditions: writing on a new topic with mechanics cues, writing on a new topic with structural cues, repeated writing with structural cues, or repeated revision with structural cues. Students in the new topics groups wrote on a different topic on days one through five; students in the repeated writing and repeated revision groups wrote on the same topic on days two through five. In the repeated writing condition a new composition was created daily without the constraints of previous drafts. In the repeated revision condition the draft from the most recent session was revised and rewritten.

On sessions two through five students received videotaped instruction and verbally rehearsed a set of three cues to improve paragraph composition. The cues related either to writing mechanics or paragraph structure, depending upon group assignment.

Writing sessions were conducted in small group settings with two to eight students. All students were read the general introduction to the study on session one (Appendix A) and scripted directions on sessions two through five (Appendices B & C). During session one all students viewed a 2-minute stimulus tape and then wrote for 20 minutes. During the second session students viewed videotaped instruction for 10 minutes, viewed a 2-minute writing topics tape, and wrote for 20 minutes. During the third, fourth, and fifth sessions, the same procedures were followed as during the second session; but, in addition, students received oral and written feedback on their most recent composition. Written feedback was delivered via a checklist that included individualized comments; oral feedback was delivered by the teacher via general comments to each experimental group.

Student compositions from the first session served as pretests. They were analyzed with the CLAS (Computerized

Language Assessment System, Borden & Watts, 1981) computer program which provided 17 measures of fluency in the areas of production, syntax, and vocabulary. In addition to the CLAS fluency measures, the compositions were analyzed by independent raters for application of the cues for mechanics and structure. The seven scores for application of the mechanics cues and one of the three scores for application of the structural cues were reported in percent correct. Subsequent analysis procedures were identical for these cue scores and the CLAS scores.

The SAS FACT procedure (SAS Institute, 1985) was used to identify three principal factors for use in the post-test analysis. The SAS PROMAX procedure (SAS Institute, 1985) was also carried out to determine whether the factors were orthogonal. Variables loading most heavily and uniquely on each factor were selected to be combined into factor scores.

Student compositions from session five served as a post-test. Raw scores for each variable across pre-tests, post-tests and groups were combined and standardized to yield scores with a mean of 100 and a standard deviation of 10. Six factor scores were then calculated for each student by combining the standardized scores for the variables previously selected for each factor.

Scores on the other two cues for structure were dichotomous. They were recorded as "0" or "1" and entered into a frequency table for later analysis.

Subjects

All students assigned to English classes for the mildly handicapped in a resource program at a public high-school (grades 9-12) in the Philadelphia area were included in the experiment. The students (N=96) were randomly assigned to one of the four experimental groups; no groupings from intact classes were maintained. Every experimental group included students ordinarily assigned to several different teachers across instructional periods. From this pool of participating students, data were retained for 48 subjects who met three criteria. First, they were classified by the school district as learning disabled in accordance with federal regulations for PL 94-142 and Pennsylvania state guidelines. Second, they were present for all five instructional sessions. Third, they had returned parental permission slips for inclusion in the study.

Documentation of grade assignment, handicapping label, and additional descriptive information was confirmed through a review of students' cumulative records. Characteristics of the subjects in each experimental group are summarized in Table 3.1. The mean grade placement and standard deviation for all subjects was 10.4 (SD = 1.09). The mean age and standard deviation for all subjects was 16-5 (SD = 5 months). No subjects received special education services for more than 37% of the day.

Nine students had full scale IQ scores on the WISC-R or WAIS-R below 80 (the range specified by the Pennsylvania Department of Education guidelines for "average" intellectual functioning). Of those nine, six had a verbal composite score on the WISC-R or WAIS-R equal to or greater than 70, and three had a verbal score equal to or greater than 80. Also, of those nine, five had a performance composite score of at least 70 and three had a performance score equal to or greater than 80.

The achievement data collected by the special education program for these students consisted of the Botel Reading Inventory and an Informal Math Inventory. Only grade equivilence scores for each measure were reported in school records. Mean scores are reported by experimental group in Table 1. The overall scores were 5.2 on the Botel and 3.9 on the Informal Math Inventory. No formal measure of written language was available, therefore writing samples were collected on day one of the study to serve as pre-test measures.

Independent Variable

The independent variable, instructional strategy, consisted of four levels: writing on a new topic with mechanical cues, writing on a new topic with structural cues, repeated writing with structural cues, and repeated revision with structural cues. The common elements of the four experimental conditions appear in Figure 3.1; the varying elements appear in Figure 3.2. Examination of Figure 3.2 reveals that conditions varied in the process of composing (writing on new topics or rewriting on the same topic) and in the focus of the instruction that was provided (cues for mechanics or cues for structure).

In the first condition, writing on a new topic with mechanics cues, students wrote on a different topic on five consecutive days and wrote a new composition on each occasion. A set of three cues to monitor writing mechanics was taught, verbally rehearsed, and monitored daily by the teacher and students. The cues represented three fundamental skills teachers often teach and monitor when teaching composition (Graves, 1983): capitalize, punctuate, and use complete sentences. Students in this condition practiced applying the cues by writing on a different topic each day.

In the second condition, writing on a new topic with structural cues, students also wrote on a different topic for five consecutive days. However, they were taught a set of cues for monitoring paragraph structure. The cues were based on the paragraph writing strategy developed for LD adolescents at the University of Kansas Institute for Research in Learning Disabilities (Moran, Schumaker & Vetter, 1981). The cues were write a topic sentence, write detail sentences, and write a clincher sentence.

In the third condition, repeated writing with structural cues, students were asked to write on the same topic for four consecutive days and wrote a new composition from start to finish on each occasion. The repeated writing procedure was modeled after the repeated reading strategy (Samuels, 1979) that has been used with reading-disabled students as a means of increasing reading fluency (Rashotte & Torgeson, 1985). Students in this group also were instructed in the use of structural cues and received feedback on their use.

In the fourth condition, repeated revision with structural cues, students were asked to write on the same topic on five consecutive days but were provided with a copy of their composition from the previous day to revise and then copy. Students were instructed to draw arrows and cross out words rather than to erase when making revisions. This assured that students had an earlier draft available from which to work throughout the composing session. Students in this group also received instruction and feedback on their use of structural cues.

Procedures

The following section will describe the training and qualifications of teachers, the materials used during instructional sessions, and the procedures followed during sessions.

Teachers

The experimenter and five research assistants served as teachers for the writing sessions. The teachers followed comprehensive directions that had been scripted for each experimental group for each session. (See Appendices A, B, and C).

Training. The research assistants met with the investigator and reviewed and roleplayed elements of the scripted procedures for teachers prior to the instructional sessions. In addition, they met with the investigator each day to discuss any questions regarding the preceding session and to briefly review procedures for the upcoming session.

Research assistants were briefed on the overall design of the study and were aware how the treatments differed between experimental groups. However, no hypotheses were suggested. It was necessary for teachers to understand the rationale for the experimental interventions that they were implementing in order to avoid involuntary introduction of contrary or confounding teaching behaviors.

Qualifications. Five of the six teachers were graduate students in special education, two were PhD. students and three were master's degree students. The sixth was a certified teacher with eight years of teaching experience and a master's degree in special education. The other five teachers had from one to six years of classroom teaching experience.

Materials

Videotaped vignettes were used as topic stimuli. The content of the tapes was excerpted from instructional television programs aired during the fall of 1985 on WPSX-TV. Each vignette was edited to be approximately two minutes in length and contained sufficient detail and action to provide students content for repeated writing sessions. The tapes did not have audio tracks and depicted open-ended situations rather than complete plots for the students to retell.

Five topics were used throughout the course of the study. The topics were counterbalanced for experimental group and instructional period (Figure 3.3). On the first day all students viewed the same topic tape. The compositions produced during that session served as pretests. On days two through five the repeated writing and repeated revision groups viewed a second topic tape. In contrast, on days two through five the different topics and mechanics groups saw different tapes each day.

A make-up session was conducted on day six for any students who had been absent from a session on the second through the fourth days. During that session, students who were in repeated writing or repeated revision groups saw the same tape they had viewed previously, but students in the different topics or mechanics groups saw a sixth topic. The introduction of an additional topic was necessary because of the counterbalanced design. During any instructional period students who had missed different days (and thus different topics) were present. It would have been impractical to show individual students different topic tapes.

Instruction in the use of the cues was videotaped, also. Scripts with comparable sequences of instruction for each session were written for each set of cues. (See Appendices D & E.) The investigator and research assistants filmed the instructional lessons in the Division of Education's television studio. After editing, the instructional tapes ranged from 7.5 to 12.0 minutes in length. The first lesson included an introduction, a justification for use of the cues, an overview of the cues, and an illustration of how a student had used each of the cues in a composition. The second lesson included an introduction, a review of the previous day's lesson, and a demonstration of how to use step one when writing a composition. The third lesson included an introduction, an review of the previous day's lesson, and a demonstration of how to use step two when writing a composition. The fourth lesson included an introduction, a review of the previous day's lesson and a demonstration of step three.

Writing Sessions

Due to scheduling problems, it was not possible for all research assistants to work for five consecutive days. However, teachers were assigned to experimental groups so that in no case did students work with more than two teachers over the course of the study.

Each writing session took place within one instructional period (approximately 43 minutes in length). Each teacher worked with a small group of from four to eight students in a small resource room setting. Two experimental groups shared each classroom; the repeated revision and the different topics groups were both being instructed in the use of structural cues so they met together for the first part of the period and then met with their teachers separately. The repeated writing and mechanics groups also shared a room but were seated in different areas of the room and were never instructed together.

On days two through five, after a brief introduction, students viewed the videotape of instruction in the use of the three cues to improve paragraph writing. Following the videotape the teacher spent up to five minutes verbally rehearsing the three cues with the students. The verbal rehearsal simply consisted of the teacher calling on individual students to recite or explain the three cues or cue subcategories. On the third through fifth days the students also received written and verbal feedback on their use of the cues and total words written on their most recent composition.

The teacher sucessively added scores and comments to students' feedback forms each day. (Samples of the mechanics and structural monitoring forms are in Appendix F). The compositions of students in the mechanics group were scored on correct applications of each cue or cue subheading. The score was recorded as a ratio, the number correct over the number of opportunities. The number of total words in the composition was also reported.

The compositions of students in the structural group were scored on the application of the three structural cues. The score for topic sentence and clincher sentence was recorded as a zero or a one (present or absent). However, the score for detail sentences was recorded as the number of appropriate sentences in the paragraph other than the topic and clincher sentences. In addition, the number of words in the topic sentence, the number of words in the clincher sentence, the average number of words per detail sentence, and the total number of words in the composition were recorded.

At the bottom of each feedback form was a place for the teacher to write comments each day. The teachers followed a guideline sheet (also in Appendix F) that instructed them to comment first on the cue the student had applied the best, second on the cue the student had

had the least success in applying, and third on fluency. The previous days' compositions were attached to the feedback sheets for all students except for the repeated writing group.

After the verbal rehearsal, the teacher showed the topic tape and then passed back the students' feedback forms that had been completed for the previous day's composition. The teacher did allow the students to chat during the tape as student motivation and preparation for writing seemed to be greatly enhanced by the exchange of ideas among peers during the videotape. Following the tape the students were informed of the time to stop and encouraged to write more than in previous sessions. Then, once the writing period of twenty minutes was underway, the teacher circulated among the students and reviewed and explained the comments on the feedback sheet.

A research assistant serving as teacher was present for the duration of all instructional sessions, and a regularly assigned teacher from the school was present to serve as a monitor for half of the sessions. If a student asked for spelling assistance the teacher responded by saying "spell it the best you can; you will not be graded on spelling." Often peers offered spelling advice. The teacher discouraged any other verbal exchange among students during the writing period and students were not allowed to leave the room except in case of an emergency. The regular classroom monitor was also discouraged from interacting with students during the writing period. When students finished writing before the twenty minute writing period was over they were encouraged by the teacher to write more. If they could not write any more they were required to sit quietly and wait. They were not allowed to get out homework or read.

The actual classroom sessions were audiotaped for later confirmation of adherance to the prescribed procedures. The audiotapes were scored by rating every verbal statement by the teacher as either in agreement or not in agreement with the experimental treatment being implemented. A random sample of 13 instructional sessions (20 % of the 64 classroom periods of instruction carried out over four instructional periods for the four experimental groups over four days) were selected to be rated. If a tape for a selected session was not available or usable due to technical problems then a substitute session was randomly selected. The overall proportion of statements in agreement with the prescribed procedures was uniformly high across experimental groups and teachers

(.99). (The rates of agreement for individual sessions appear in Appendix G.) However, it should be noted that many of the individual comments made to students while they were writing were administered in a very low voice or whisper and were not discernable from the audiotape.

In addition, the written comments the teachers recorded on the students' feedback sheets were also checked for consistency with the prescribed procedures. A random sample of 20 feedback sheets were selected and scored. All comments appearing on the sheet were scored. Each statement was scored as in agreement or not in agreement with the prescribed procedures for that experimental group (comments consisted of a varying number of statements). The overall rate of agreement for the written comments on the feedback sheets was also consistently high, (.98). (Rates of agreement for each experimental group are listed in Appendix G.) Although it is clear from the reliability measures that there was little confounding of treatments, a review of the structural cue feedback sheets also revealed that the comments were very general. Within the guidelines, more specific suggestions were also allowable, and might have been of more assistance to the students when rewriting.

Dependent Variable

The compositions produced on the fifth day were analyzed for indicators of fluency and application of the cues that had been taught. Guidelines for scoring application of the cues were matched to the instructional content. The categories for cue scores were mutually exclusive. Indicators of fluency were determined by the CLAS (Computerized Language Analysis System, Borden & Watts, 1981) computer program.

The CLAS program monitors three types of fluency variables: production, syntactic complexity, and diversity of vocabulary. Variables for production include total words, total sentences, and total t-units; for syntax, sentence length, t-unit length, and words per paragraph; and for vocabulary, number of different words, index of diversification, word usage (N-TYPES), word length, Carroll's type token ratio, Herden's K, segmental type token ratios, and an overall type token ratio.

Production

The first measure, total words, is determined by simply counting the total number of words in each composition. Multiple occurrences of the same word will receive equal weight. Word frequency has consistently been demonstrated to be a valid indicator of production and a strong predictor of qualitative ratings (Grobe, 1981; Roos, 1981; and Stewart & Leaman, 1983).

The second production measure, number of sentences, is determined by placement of punctuation by the student. A period, question mark, or exclamation point indicates the completion of a sentence. The primary disadvantage of sentence counts is that they may be inaccurate due to incorrect punctuation of sentence fragments or excessive use of run-on sentences (Hunt, 1965).

The third measure, number of T-units, requires inserting markers between T-units on a copy of each student composition. A T-unit is defined as the smallest unit of language that can stand alone as an independent clause (Hunt, 1965) and has been widely employed in composition research. A T-unit may consist of a single independent clause, or an independent clause accompanied by one or more dependent clauses. Number of T-units was determined by simply counting the total number of T-units per composition.

Syntax

Sentence, T-unit, and paragraph length can be considered indicators of syntactic complexity. Average sentence and T-unit length increase as compound and complex sentence use replaces predominantly simple sentence use. And, as sentence and T-unit length increase so will paragraph length. However, aquisition of certain types of sophisticated syntactic structures, such as embedded modifiers, may result in a decrease in sentence and T-unit length (Loban, 1966 and Dilworth, Reising & Wolfe, 1978).

Average sentence length was determined by dividing the total number of words by the number of sentence punctuation markers (periods, question marks, and exclamation points). Average length of T-units was determined by counting the total number of words per T-unit, summing the totals, and then dividing by the number of T-units in the total composition.

Average paragraph length was determined by dividing the total number of words per composition by the number of new paragraph markers (indentations).

Vocabulary

Indicators of vocabulary diversity include word length (longer words are considered more unusual and mature) and frequency of word use (many different words are considered superior to repeated use of the same words). The CLAS program produces one index of word length and eight indices of word frequency. Word length was determined by averaging the number of characters (letters) per word for all words in a composition.

Word frequency indices required determining the number of different words (types) and the number of occurrences of each word (tokens) in a composition. Type and token counts were then used to calculate a variety of type-token ratios: an overall type token ratio, segmental type token ratios, Carroll's type token ratio, and Herden's K.

Number of different words (N-TYPES) was reported separately as the first index of word frequency. An overall type token ratio was determined for the entire composition for the second index of word frequency. In addition, segmental type-token ratios were determined for segments of 50, 100, and 200 words for the third, fourth, and fifth indices. These ratios were obtained by dividing a composition into successive segments of a specified length, calculating a type-token ratio for each segment, and then determining the mean ratio for all segments.

The fifth word frequency index was Carroll's type token ratio. It is reported to be less influenced by composition length than the segmental ratios (Carroll, 1964). It is calculated by dividing the square root of two times the tokens.

The sixth word frequency index was Herden's K (Figure A.2). It is also reported to be relatively independent of composition length (Borden & Watts, 1985).

Finally, the index of diversification was determined for the eighth measure of vocabulary frequency. This index indicates the probability that two words randomly selected from a composition will be the same word. It's determined by averaging the mean number of words between recurrences of any words appearing in a composition more than five times.

Table 3.1

Grade placement, age, percentage of time in special education, full scale IQ, and grade equivalence achievement scores in reading and math for experimental group

		MECH	REPWR	REPREV	DIFFTOP	TOTAL
Grade		n = 12	n = 12	n = 12	n = 12	N = 48
	$\bar{X}$	10.3	10.7	10.6	10.2	10.4
	SD	.98	.89	1.31	1.17	
Age (9/85)		n = 11	n = 11	n = 10	n = 11	N = 43
(yrs.-mas.)	$\bar{X}$	16 - 4	16 - 5	16 - 8	16 - 3	16 - 5
	SD	1.34	1.16	1.62	1.19	
% SPLED		n = 11	n = 11	n = 11	n = 11	N = 44
	$\bar{X}$	20%	23%	27%	25%	24%
	SD	6.06	7.05	10.47	8.65	
Full IQ		n = 9	n = 11	n = 10	n = 11	N = 41
	$\bar{X}$	90	89	92	87	89
	SD	9.08	13.52	10.02	11.62	
Reading		n = 10	n = 8	n = 11	n = 11	N = 40
(grade score)	$\bar{X}$	4.8	5.3	5.1	5.5	5.2
	SD	.81	1.19	.97	.5	
Math		n = 7	n = 6	n = 10	n = 7	N = 30
(grade score)	$\bar{X}$	3.4	4.2	4.4	3.7	3.9
	SD	1.76	1.34	1.30	.79	

Session	1	2	3	4	5
Topic 1	X	-	-	-	-
Topics 2 - 5 Counterbalanced	-	X	X	X	X
Cue Instruction	-	X	X	X	X
Oral Feedback	-	-	X	X	X
Written Feedback	-	-	X	X	X

Figure 3.1. Common Elements of Independent Variables According to Session

Independent Variable	Mechanics Cues	Structural Cues	Repeated Writing	Repeated Revision
Different Topics	X	X	-	-
Same Topic	-	-	X	X
Draft for Rewriting	-	-	-	X
Mechanics Cues	X	-	-	-
Structural Cues	-	X	X	X

Figure 3.2. Contrasting Elements of Independent Variables According to Session

Instructional Period	Experimental Group	Day Second	Third	Fourth	Fifth
3	MECN	1	2	3	4
	REPWR	1	1	1	1
	DIFFT	3	4	1	2
	REPREV	3	3	3	3
5	MECH	2	3	4	1
	REPWR	3	3	3	3
	DIFFT	4	1	2	3
	REPREV	1	1	1	1
6	MECH	3	4	1	2
	REPWR	4	4	4	4
	DIFFT	1	2	3	4
	REPREV	2	2	2	2
7	MECH	4	1	2	3
	REPWR	1	1	1	1
	DIFFT	2	3	4	1
	REPREV	3	3	3	3

Figure 3.3. Counterbalancing of Topics by Treatment

$$K = \frac{\text{SUM } f^2 \#(f) - \text{SUM } f\#(f)}{[\text{SUM } f\#(f)]^2},$$

f = the frequency of occurence

#(f) = number of words occurring at that frequency

Figure 3.4. Formula for Herdan's K

Chapter 4

RESULTS

This chapter includes an overview of the preparation of data for analyses, a description of the analysis procedures, and a summary of the findings related to each of the experimental hypotheses.

Fluency

The procedures and results of data analysis for fluency variables are reported first.

Preparation of Data

Compositions were scored for fluency by the CLAS (Computerized Language Analysis System, Borden & Watts, 1981). The following variables were evaluated for each student: Carroll's type-token ratio, index of diversification, Herdan's K, mean segmental type-token ratios for segments of 50 and 100 words, mean words per paragraph, mean words per sentence, mean words per t-unit, number of exclamation marks, number of questions, number of sentences, number of statements, number of t-units, number of different words (types), and number of words. Although the mean segmental type-token ratio for segments of 200 words was also produced by the program, it was not considered because of missing values for 29 pre-test compositions containing less than 200 words.

T-units had to be handmarked prior to the CLAS analysis. Inter-rater agreement on a sample of eight compositions was determined for T-unit markers by dividing the number of agreements by the number of agreements plus the number of disagreements and multiplying by 100. It was found to be .97.

Factor Analysis

A principal components factor analysis with oblique rotation was then carried out on the pretest compositions for the variables measured by the CLAS program to reduce redundancy in the data and identify underlying fluency factors. Table 4.1 contains the eigenvalues and percent of variance accounted for by each factor in the oblique factor analysis. Three factors had eigenvalues greater than 1.0 and accounted for at least 10 percent of the variance. In combination the three accounted for 94 percent of the total variance and were selected for rotation.

The variables that loaded most heavily and uniquely on each factor were combined into factor scores (Table 4.2). As a result nine variables were retained for use in the final analysis. Number of different words, number of words per composition, number of T-units, Carroll's type-token ratio, mean segmental type-token ratio for segments of 50 words, number of sentences per composition, and mean words per paragraph were combined to represent the first factor. This factor appeared to measure general fluency. Herdan's K was used as the second factor and mean words per T-unit was used as the indicator for the third factor. The second factor appeared to indicate vocabulary diversity and the third, syntactic complexity. All raw scores were transformed into standard scores with a mean of 100 and a standard deviation of 10 (Runyan & Haber, 1977) before being avaraged to produce scores for each of the three fluency factors.

Means for the fluency factors are presented by treatment group in Table 4.3. Inspection of Table 4.3 reveals little variation in means among variables. Nonetheless, an analysis of variance with repeated measures (ANOVR) using the ANOVR computer program (Games, et al., 1985) was performed.

Analysis of Data

The factor scores were entered into a 4 (Treatments) X 2 (Pre-test, Post-test) X 3 (Fluency Factors) analysis of variance with repeated measures. One factor, experimental treatment, was varied between subjects to form four between subjects cells. Two repeated measures (pre and post) for each of three composite fluency scores were within subjects factors. The summary of this analysis appears in Table 4.4.

The analysis of variance procedure assumes homogeneity of variances among the groups being compared. Because the variances and covariances among the within subjects factors were not equal ($p < .05$), the degrees of freedom were adjusted (Games, et al., 1985) for the overall F-tests. However, even with this adjustment, the pre-test to post-test effect was significant as was a pre-test to post-test and fluency measure interaction. (See Table 4.4).

Since treatment was not involved in any interactions, the main effect for treatment was examined. However, no main effect was evident.

Since pre-test to post-test and fluency factors interacted (Figure 4.1), analysis of simple effects were conducted. Pre to post changes on each factor were compared separately using the LSD procedure (Games, 1974). (See Table 4.5).

For fluency factor effects, the three factors were first compared at pre-test and then at post-test. (See Table 4.6). Means that did not differ significantly are indicated by underlining according to Duncan's (1955) procedure. These follow-up tests for simple effects were performed using the algebraic equality form of the WSD procedure (Games, 1976). This procedure provides a more conservative value than the conventional Tukey's WSD statistic and was used because the assumption of homogeneous variances and covariances had been violated.

Evaluation of Hypotheses

Hypothesis 1 stated that there will be no differences in performance on measures of writing fluency among the four experimental groups. Because no significant effects were identified, Hypothesis 1 was retained.

Hypothesis 2 stated that there will be no differences in performance on measures of writing fluency from pre-test to post-test. Because there was a signigicant pre-test to post-test effect for Factor 1 (Production), Hypothesis 2 was rejected.

Hypothesis 3 stated that there will be no differences in performance among the three fluency factors. Because no significant effects were identified, Hypothesis 3 was retained.

Application of Cues

The data analysis for application of cues is reported next and included both parametric and non-parametric procedures.

Parametric Analysis

The procedures involved in the parametric analysis of cue scores will be described in three sections: preparation of data, analysis of data, and evaluation of hypotheses.

Preparation of Data

Preparation of the data for evaluating the extent to which students had applied cues included scoring and conducting a factor analysis.

Scoring. In addition to the computerized analysis of fluency variables, the first and last compositions were scored manually for the language features emphasized in the structural and mechanics cues. Scores for each of the mechanics cues (complete sentences, indentation and punctuation, and capitalization) and for the one structural cue (detail sentences) were calculated as the proportion of correct applications (the number of correct applications divided by the number of opportunities.)

When a composition contained more than one paragraph (as 8 pre-test and 21 post-test compositions did), each paragraph indicated by the student, through indentation or spacing, was scored separately for detail sentences. Then the proportion scores for all paragraphs were averaged.

Nine randomly selected compositions were also scored by an independent rater on the manually scored language features. The overall rate of agreement was .96. Furthermore, the rate of agreement was uniformly high across measures.

Factor Analysis. A principal components factor analysis with oblique rotation was then conducted for the seven variables that had been reported in proportion scores. The factor analysis was performed to determine the composition factors that would reflect all the available information but not be limited to the individual scores students had received on their feedback sheets. Table 4.7 contains the eigenvalues and percent of variance accounted for by each factor in the oblique factor analysis. Three factors had eigenvalues greater than 1.0 and accounted for at least 10 percent of the variance. In combination, the three accounted for 100 percent of the variance and were selected for rotation.

As evident from the rotated matrix in Table 4.8, there was little overlap among the three factors. Factor 1 reflected punctuation skill and included use of complete sentences, ending punctuation marks, commas, and quotation marks. The second factor represented paragraph organization and included indentation and use of relevant detail sentences. The third factor represented capitalization skill and included capitalizing proper nouns and capitalizing sentences.

The proportion scores for each individual variable were standardized prior to being combined into factor scores. As in the case of the fluency variables, a standard scale with a mean of 100 and a standard deviation of 10 was employed (Runyan & Haber, 1977). Mean scores for the three factors are presented by experimental group in Table 4.9.

Analysis of Data

The factor scores were then entered into a 4 (Experimental Treatment) X 2 (Pre-test, Post-test) X 3 (Cue Scores) analysis of variance with repeated measures. Experimental Treatment was a between subjects factor and Pre-test/Post-test and Cue Scores were within subjects factors. The summary of this analysis appears in Table 4.10. As in the case of the analysis of variance for fluency, the ANOVR with Repeated Measures program (Games et al., 1985) was used to conduct the analysis of variance and a priori hypotheses were retained at the .05 level of significance.

Inspection of Table 4.10 reveals a significant interaction between pre-test/post-test scores and experimental group. (Also see Figure 4.2.) Since the cue scores were not involved in any significant interactions, the main effect (for cue scores) was examined. But, no main effect for cue scores was present.

Since there was a significant interaction between pre-test/post-test and experimental group, analyses of simple effects were conducted. For pre-test/post test effects, pre to post differences for each experimental group were compared separately using the LSD procedure (Games, 1976). (See Table 4.11). For experimental group effects, the four groups were first compared at pre-test and then at post-test. (See Table 4.12). Means that did not differ significantly are indicated by underlining according to Duncan's procedure (Duncan, 1955).

Evaluation of Hypotheses

Hypothesis 4 stated that there will be no differences in performance among the four experimental groups. Because the mechanics group scored significantly higher than the different topics and the repeated writing groups on the post-test, this hypothesis was rejected.

Hypothesis 5 stated that there will be no differences in scores for application of cues from pre-test to post-test. Because there was a significant effect for pre-test to post-test, this hypothesis was rejected.

Hypothesis 6 stated that there will be no differences among the three measures for application of cues. Because no significant effects were identified, this hypothesis was retained.

Non-Parametric Analysis

Non-parametric procedures were used to analyze the cue scores reported in dichotomous form. Dichotomous scores were reported for application of two structural cues: use of topic sentences and use of detail sentences. The non-parametric analysis will be described in three parts: preparation of data, analysis of data, and evaluation of hypotheses.

Preparation of Data

Application of two structural cues (topic sentence and clincher sentence) was scored as present or absent. Each paragraph, indicated by the student, through indentation or spacing, was scored for the two types of structural cues. For compositions with more than one paragraph, scores for each type of cue were averaged. Average cue scores equal to or less than .50 were then rounded down to 0.0 and scores greater than .50 were rounded up to 1.0. Averaging was necessary for 8 pre-test and for 21 post-test compositions.

Analysis of Data

First, the four experimental groups were compared on their use of topic and clincher sentences following intervention. The post-test score frequencies were entered into a table for analysis using Cochran's Q procedure (Seigal, 1956). The mean frequencies and obtained Q for both analyses are presented in Table 4.13. Inspection of Table 4.13 reveals that the experimental groups did not differ significantly at post-test in their application of the topic sentence and clincher sentence cues.

Second, the pre-test to post-test gains for each measure were evaluated separately for the group instructed in mechanics cues and the groups instructed in structural cues. The Test for the Significance of Changes (Seigal, 1956) was used to determine whether performance improved significantly from pre-test to post-test for students instructed in structural cues. (See Figures 4.3 and 4.4).

The McNemar procedure indicated that groups who received instruction in structural cues did not make significant gains from pre-test to post-test in the use of topic sentences ($p < .637$, $df = 1$). However, the same groups did make significant gains in the use of clincher sentences ($p < .001$; $df = 1$).

For the group instructed in mechanics the binomial procedure was used to evaluate the significance of pre-test to post-test differences. The binomial procedure is recommended by Seigal (1956) for samples for which the expected value for subjects who changed from pre-test to post-test is less than five. (See Figures 4.5 and 4.6).

The binomial procedure indicated that groups instructed in mechanics cues also did not make significant gains in the use of topic sentences ($p < .5$; df = 1), but also did make significant gains in the use of clincher sentences ($p < .02$; df = 1).

Evaluation of Hypotheses

Hypothesis 7 stated that there will be no differences among the experimental groups in the use of topic sentences in post-test compositions. Because no significant effect for experimental group was identified by the Cochran's Q test, this hypothesis was retained.

Hypothesis 8 stated that there will be no differences among the experimental groups in use of clincher sentences in post-test compositions. Because no significant effect for experimental group was identified by the Cochran's Q test, this hypothesis was also retained.

Hypothesis 9 stated that there will be no differences between pre-test and post-test scores for the use of topic sentences by the groups who have been instructed in structural cues. Because no significant change was identified by the Mc Nemar test, this hypothesis was retained.

Hypothesis 10 stated that there will be no differences between pre-test and post-test scores for the use of topic sentences by the group who had been instructed in mechanics cues. Because no significant change was identified by the Binomial test, this hypothesis was also retained.

Hypothesis 11 stated that there will be no differences between pre-test and post-test scores for the use of clincher sentences by the groups who were instructed in structural cues. Because a significant change was identified by the Mc Nemar's test, this hypothesis was rejected.

Hypothesis 12 stated that there will be no differences between pre-test and post-test scores for the use of clincher sentences by the group who was instructed in mechanics cues. Because a significant change was identified by the Binomial test, this hypothesis was also rejected.

Table 4.1

Eigenvalues and proportion of variance accounted for by fluency factors on principal components analysis

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Eigenvalue	7.15	1.73	1.43	.65	.39
Proportion of Variance	.65	.15	.13	.06	.04

Table 4.2

Factor matrix with oblique rotation for fluency scores (decimals omitted)

Variables	Factor 1	Factor 2	Factor 3
NWORD_C	95*	21	23
NTYPES	93*	33	14
NT-UNITS	88*	30	-11
NSENT_C	82*	- 1	-57
NSTAT	81	- 7	-58
CARRLTTR	81*	52	- 2
MWORD_P	72*	11	22
MSTTR50	61*	47	3
OVERTTR	-80	30	-33
MSTTR100	34	56	- 1
DIVERS	50	50	- 4
NEXCLAM	1	34	11
NQUES	0	0	0
HERDAN_K	-19	-74*	21
MWORK_S	12	16	70
MWORD_T	3	14	53*

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*Variable used to compute factor score

Table 4.3

Mean fluency factor scores by experimental group at pre-test and at post-test

	Factor 1		Factor 2		Factor 3	
	Pre	Post	Pre	Post	Pre	Post
Mechanics	92.41	102.78	102.52	101.96	103.18	98.57
Diff. Topics	97.08	100.80	100.20	103.56	97.83	98.20
Rep. Writing	96.22	102.54	97.74	97.33	103.80	99.24
Rep. Revision	100.21	106.25	99.10	101.64	99.22	100.74

Table 4.4

ANOVR summary table for three fluency factors

Between Subject	df	F	Probability	Probability with Conservative df
A (Treatment)	3	.55	p < .6	
error	44			
Within Subject				
J (Pre-Post)	1	6.16	p < .02*	
AJ	3	.58	p < .63	
error	44			
K (Factors)	2	.10	p < .90	
AK	6	1.03	p < .41	
error	88			
JK	2	6.22	p < .003**	p < .02
AJK	6	.74	p < .61	

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*p < .05
**p < .005

Table 4.5

Pairwise comparisons of means for pre-test and post-test by fluency factors (production, Herdan's K, and T-unit length)

	$\bar{X}$ Pre	$\bar{X}$ Post	F
F_1	96.48	103.10	4.11*
F_2	99.89	101.12	.77
F_3	101.01	99.19	1.13

*$p < .001$

Table 4.6

Multiple comparisons of means for fluency factors (production Herdan's K, and T-unit length) at pre-test and at post-test

	F_1	F_2	F_3
Pre-test	96.48	99.89	101.01
Post-test	103.10	101.12	99.19

Note: Underlining indicates no significant differences exist between means

Table 4.7

Eigenvalues and proportion of variance accounted for by cue scores in principal components analysis

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Eigenvalue	1.36	.56	.24	-.06	-.12
Proportion of Variance	.69	.28	.12	-.03	-.06

Table 4.8

Factor matrix with oblique rotation for cue scores (decimals omitted)

	Factor 1	Factor 2	Factor 3
Detail Sentence	67*	11	-22
Indent	65*	26	16
Complete Sentence	17	65*	- 5
Punctuate	16	60*	30
Capitalize	- 4	5	43*

*Variable used to compute factor score

Table 4.9

Mean cue factor scores by experimental group

	Factor 1		Factor 2		Factor 3	
	Pre	Post	Pre	Post	Pre	Post
Mechanics	99.98	106.18	95.23	106.39	102.85	103.12
Diff. Topics	100.92	96.62	98.71	100.99	99.83	99.21
Rep. Writing	97.51	98.69	98.56	100.49	97.11	101.15
Rep. Revision	102.39	100.31	101.87	101.41	98.56	99.74

Table 4.10

ANOVR summary table for cue score factors

Between Subject	df	F	Probability
A (Treatment)	3	1.96	$p < .14$
error	44		
Within Subject			
J (Pre-Post)	1	5.07	$p < .02$*
AJ	3	4.12	$p < .01$*
error	44		
K (Factors)	2	.03	$p < .9$
AK	6	.57	$p < .7$
error	88		
JK	2	2.00	$p < .14$
AJK	6	1.69	$p < .13$
error	88		

*$p < .05$
**$p < .005$

Table 4.11

Pairwise comparisons for pre-test and post-test mean cue factor scores (for punctuation, paragraph organization, and capitalization) by experimental group

	$\bar{X}$ Pre	$\bar{X}$ Post	F
Mechanics	99.36	105.23	3.72*
Diff. Topics	99.82	98.94	.57
Rep. Writing	97.73	100.11	1.53
Rep. Revision	100.94	100.49	.32

*$p < .001$

Table 4.12

Multiple comparisons of mean cue factor scores (for punctuation, paragraph organization, and capitalization) for experimental groups at pre-test and at post-test

	Diff. Top.	Rep. Writ.	Rep. Rev.	Mech.
Pre-test	99.82	97.73	100.94	99.36
Post-test	98.94	100.11	100.49	105.23

Note: Underlining indicates that differences between means are not significant at the .05 level.

Table 4.13

Mean frequencies by experimental group and Cochran's Q values for topic and clincher sentences at post-test

	Freq.	df	Q	Prob.
Topic				
Mechanics	8	3	1.0	$p < .8$
Diff. Topics	10			
Rep. Writing	12			
Rep. Revision	10			
Clincher				
Mechanics	9	3	3.0	$p < .3$
Diff. Topics	11			
Rep. Writing	11			
Rep. Revision	9			

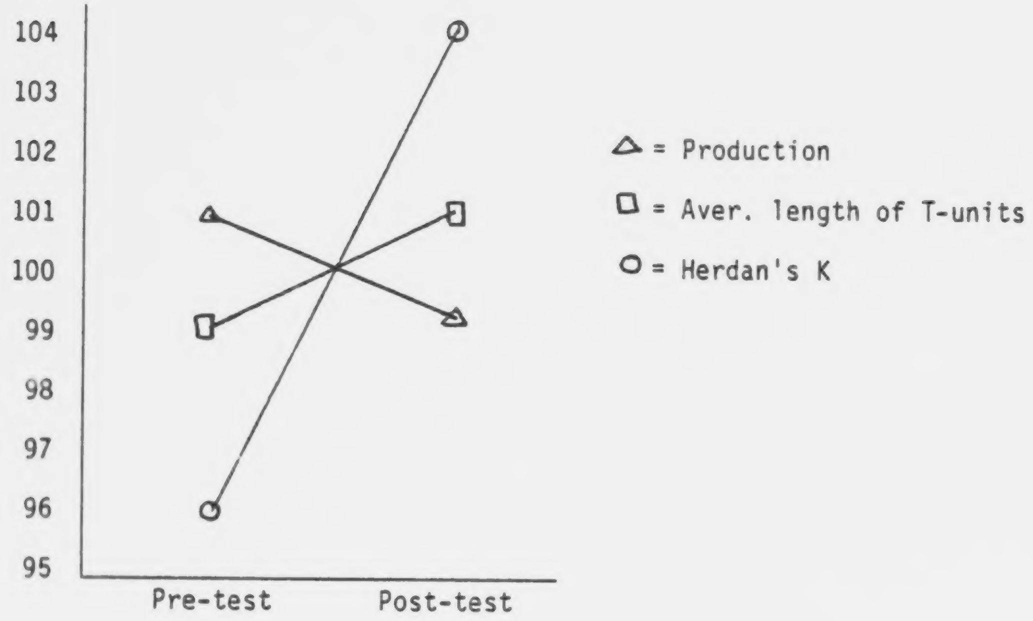

Figure 4.1. Interaction of Fluency Measure and Writing Session

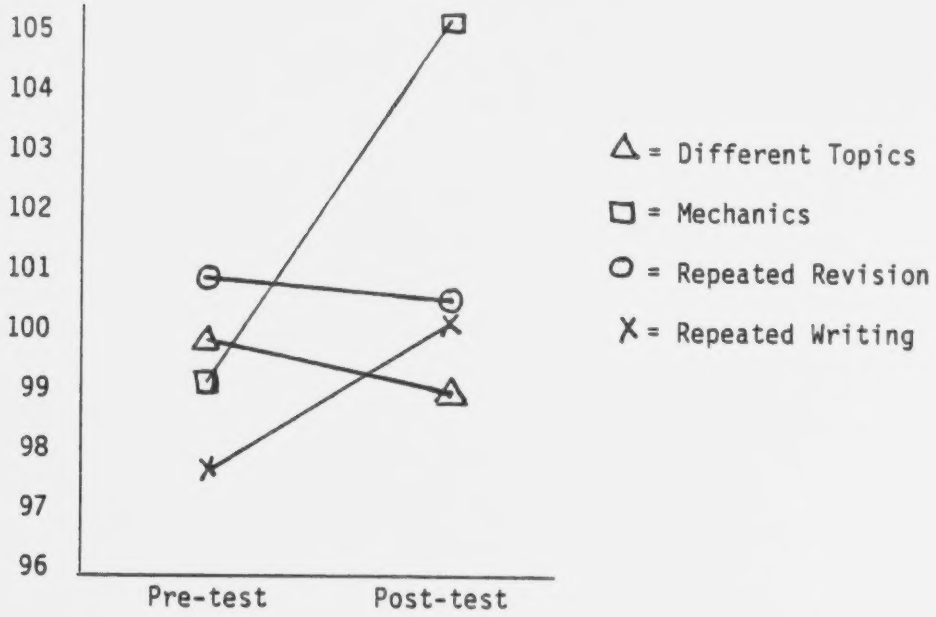

Figure 4.2. Interaction of Experimental Group and Writing Session

		Post-test	
		0	1
Pre-test	1	4	28
	0	1	4

Figure 4.3. Topic Sentences Matrix for Structural Cues Group

		Post-test	
		0	1
Pre-test	1	1	7
	0	6	22

Figure 4.4. Clincher Sentences Matrix for Structural Cues Group

		Post-test	
		0	1
Pre-test	1	3	7
	0	0	2

Figure 4.5. Topic Sentences Matrix for the Mechanics Cues Group

		Post-test	
		0	1
Pre-test	1	0	3
	0	3	6

Figure 4.6. Clincher Sentneces Matrix for the Mechanics Cues Group

Chapter 5

DISCUSSION AND CONCLUSIONS

This chapter discusses the findings and limitations of the study and states conclusions that can be drawn about the effects of repeated writing upon the writing fluency of learning disabled adolescents.

Summary of Findings

A significant pre-test to post-test gain was identified across groups for the general fluency factor (including measures of production). Also, significant pre-test to post-test gains were evident across groups for the application of cues factors. However, the mechanics group did score significantly better than two of the structural groups on the application of cues factors. Neither mechanics nor structural groups made significant gains in the use of topic sentences, but both did improve significantly in using clincher sentences. However, no significant differences between the experimental groups were noted in regard to use of clincher sentences on the post-test.

Discussion

The effects of the four experimental treatments upon three characteristics of writing fluency measured by the

CLAS program were examined first. Then the effects of the treatments upon five characteristics of writing fluency related to application of cues for mechanics and structure were considered.

Production, Mean T-Unit Length, and Herdan's K

The three measures of writing fluency derived from the dataset created by the CLAS program included a composite score for production (comprised of number of types, number of words per composition, Carroll's type-token ratio, number of T-units, mean type-token ratio for segments of 50 words, and mean words per paragraph), mean T-unit length, and Herdan's K.

Hypothesis 1. There will be no differences in performance on measures of writing fluency among the four experimental groups.

No significant differences were identified between the experimental groups on pooled pre and post-test scores across fluency measures. The processes of repeated writing, repeated revision, and writing on a new topic did not appear to have a differential effect on writing fluency. Neither did instruction in content versus instruction in mechanics seem to have a differential effect on fluency.

In their study of middle school students, Hansen & Lovitt (1973) found that after instruction in mechanics or content for more than 20 sessions, fluency scores did not differ significantly between the two groups. Neither group made gains in number of words produced, but both made gains in sentence length and number of different words. The present findings support their conclusion that instruction in mechanics may not impact differently on writing fluency than instruction in content. Furthermore, the present study suggests that instruction in content in combination with opportunities for repeated writing or repeated revision, as recommended in the process approach to writing instruction (Graves, 1985 and Carroll, 1984), may not have a significant effect on writing fluency, either, at least on a short-term basis as was the case in this study.

Hypothesis 2. There will be no differences in performance on measures of writing fluency from pre-test to post-test.

Performance on Fluency Factor 1 increased significantly from pre-test to post-test. Fluency Factor 1 is a measure of general language production and includes the variables: number of types, number of total words, Carroll's type-token ratio, number of T-units, mean type-token ratio (for segments of 50 words), and words per paragraph. Thus, it appears that across a series of structured writing sessions, focusing either on the

the capitalization score included beginning capitalization and proper nouns.

Hypothesis 4. There will be no differences in performance among the four experimental groups.

No significant differences were identified between the experimental groups on pooled pre and post-test scores across measures of cue application. The processes of repeated writing, repeated revision, and writing on different topics did not have differential effects on students' application of mechanics and structural cues. Hansen (1978a) also failed to identify significant differences in editing and proofreading variables for college students who completed revisions and those who did not. The editing variables in Hansen's study were closely related to structural cues and the proofreading variables included many of the same measures as did the mechanics cues used in the present study. Students in Hanson's study had only had one opportunity to revise, though. Thus, it appears that increased opportunities to revise, even in combination with instruction, may not enhance student's accuracy in application of structural or mechanics cues, at least initially as was the case in these two studies.

Hypothesis 5. There will be no differences in scores for application of cues from pre to post test.

Instruction in mechanics cues resulted in significant increases in scores for application of cues from pre-test to post-test and in significantly higher post-test scores than instruction in structural cues for two of three groups. As the different topics group receiving instruction in structure did not make significant gains from pre to post-test, the gains of the mechanics group can be attributed to instruction in mechanics cues rather than to the process of writing on different topics daily. Hansen (1978) also observed significant gains from pre to post-test for college students who revised compositions based on feedback on content and mechanics and those who simply completed correction worksheets on the same factors. Her conclusion was that students benefit as much from discussion of feedback and methods of revision as they do from actually completing the revision and copying process. In the present study the instruction sequence also included discussion of feedback and demonstration of cue application via videotape and thus allows for further qualification of Hansen's conclusion. The present study suggests that instruction that includes feedback and demonstration of techniques is as crucial to improvement as the process of writing on different topics, repeated revision, or repeated writing. Moreover, instruction in mechanics appears to have a more diffuse effect than instruction in structure.

Hansen & Lovitt (1978) also found that although students writing on different topics improved with feedback on either mechanics or content, feedback on mechanics resulted in greater gains in punctuation and capitalization. Hansen and Lovitt's subjects were ages 9 to 11 and thus for developmental reasons may have had lower initial scores in mechanics and consequently, more opportunity to make significant improvement. Regardless, the important similarity between the findings of the two studies is that instruction in mechanics seemed more effective than instruction in content in improving many of the mechanics aspects of writing, and also equally effective in improving the structural aspects.

Hypothesis 6. There will be no differences among the three scores for application of cues.

Scores on the three measures for application of cues did not vary as a function of experimental group or writing session.

Topic and Clincher Sentences

Two additional scores were analyzed for application of structural cues: use of topic sentences and use of clincher sentences. The post-test performance of the four experimental groups was examined and comparisons were made between students instructed in mechanics cues (mechanics) and for students instructed in structural cues (different topics, repeated revision, and repeated writing.

Hypothesis 7. There will be no differences among the experimental groups in use of topic sentences in post-test compositions.

There were no significant differences in use of topic sentences as a function of experimental treatment. A ceiling effect may have precluded differential improvement on this measure. Pre-test scores were uniformly high on application of topic sentences, suggesting that the students had attained mastery of that cue prior to the experimental instruction.

Hypothesis 8. There will be no differences among the experimental groups in use of clincher sentences in post-test compositions.

No significant differences existed in the use of clincher sentences as a function of experimental treatment. Despite the fact that the rewriting and revision groups received feedback on how to improve their paragraphs by including clincher sentences and then had repeated opportunities to attempt it, they did not perform significantly better on the post-test than either the mechanics or the different topics group.

Hypothesis 9. There will be no differences between pre and post-test scores in use of topic sentences for students who have been instructed in mechanics cues.

Students who were instructed in mechanics cues did not improve significantly in their use of topic sentences. On this variable a ceiling effect may have occurred. because so many students used topic sentences on the pretest, limiting the opportunity for significant improvement by the entire group.

Hypothesis 10. There will be no differences between pre and-post test scores in use of topic sentences for students who have been instructed in structural cues. No significant differences were identified on this variable for students who had received instruction in structural cues, either. Once again, a ceiling effect was present; students used topic sentences on the pretest.

Also, credit was given for a topic sentence that occurred anywhere in the first paragraph. This criteria was used because students receiving instruction in structural cues had been told that a topic sentence did not necessarily have to be the first sentence. A sample paragraph was provided on videotape in which the first two sentences established the setting and the third sentence was the topic sentence. Some students used that format while others simply failed to establish clearly the topic until the second or third sentence. As it was impossible to distinguish between the two with an acceptable level of reliability, a more liberal procedure of counting an appropriate topic sentence that occurred anywhere in the first paragraph was used. This may have resulted in more false positive scores than would be expected.

Hypothesis 11. There will be no differences between pre and-post test scores in use of clincher sentences for students who have been instructed in mechanics cues.

Students who received instruction in mechanics cues scored significantly higher on clincher sentences on the post-test than on the pre-test. This finding was not anticipated, as students in this group did not receive instruction in the use of clincher sentences. It appears that instruction in mechanics, such as indentation of paragraphs and use of complete sentences, can also influence performance on structural content.

Hypothesis 12. There will be no differences between pre and-post test scores in use of clincher sentences for students who have been instructed in structural cues.

Students who received instruction in structural cues scored significantly higher on clincher sentences after instruction. This result was expected. The instruction that students received in the use of structural cues was very similar to that presented to students in the paragraph organization strategy taught to students through the Institute for Research in Learning Disabilities (Moran, Schumaker, & Vetter, 1981). In that research, eight students were taught to apply the strategy to three different types of paragraphs and received a composite percentage score for application of the different elements of the strategy. All students made gains from pre to post-test, although it is impossible to ascertain whether they all improved in the single skill of use of clincher sentences.

Limitations

The limiting factors include the length of intervention, procedural problems including treatment contamination, prior instruction, and the sample size.

Length of Intervention

Students participated in only one cycle of repeated writing or repeated revision. Previous investigations of repeated reading as an instructional intervention (Herman, 1985 and Rashotte & Torgeson, 1985) have usually incorporated a similar number of repetitions (i.e. 3-5 rereadings) but more cycles (i.e. for 5-7 different stories). Likewise, advocates of repeated writing and repeated revision (Calkins, and Clay, 1975) view aquisition of writing fluency as a developmental process, the rate of which will vary greatly among individuals. They warn that development may be fostered, but can not be hurried by instruction, and describe growth in terms of long-term gains (i.e. months and years versus sessions). Specific instruction in mechanics or structural cues has varied in length, although most interventions included more instructional sessions than the present study (Hansen, 1978a; Lovitt & Hanson, 1978b; and Moran, Schumaker, & Vetter, 1981). It is pcssible that if the experimental procedures had been applied for several cycles, greater differences among the treatment effects would have emerged.

Procedural Problems

Although many elements of instructional procedure were controlled by nature of the design of this study and careful adherance to specified protocols, the experiment was carried out on-site in a public school where certain conditions were beyond the experimenter's control. Limited classroom space necessitated that two groups be taught simultaneously in the same classroom. Thus, noise level was a problem, particularly during the viewing of the videotapes in the mechanics and different topics classroom.

It is also likely that some contamination of treatments occurred as a result of this situation. Although it would have been difficult for students in one group to discern all that was being presented to the other group in the same room, certainly the cues and other key phrases unique to a different treatment were probably overheard by students within a different treatment group.

Another distraction that may have differentially affected student performance was the distribution of warning slips during the writing classes. On two of the five days, two teachers insisted on distributing failure notices for English while the students were engaged in their daily writing.

A third limitation that arose was the inability of the investigator to monitor all the groups' individual feedback sheets daily. Because the teachers had extensive scoring to complete on the feedback sheets each evening, it was not possible to review all the individual comments that were made. Although there was no confounding of treatment effects due to inappropriate comments, if the feedback had been more specific, greater treatment effects might have been produced.

Sample Size

The small sample size per experimental group was a limitation, particularly because of the extensive variability in performance within groups. For the overall tests, this resulted in a large error term and a low power to detect differences among the groups. For example, for the main effect of experimental group for fluency factors the power was less than .5; a sample of size of 70 per group (N=280) would be needed to attain a power equal to .50. Further power analyses reveal only one effect that might reach significance within the context of a practically, attainable sample size, the pre-test to post-test by cue scores and experimental group interaction. However, even in that case a sample of 40 per group (N=160) would be needed to attain a power of .90.

And finally, the elements of the experimental conditions are not unique; many teachers may provide opportunities to revise, others provide feedback on mechanics etc. However, neither are the conditions intended to represent a particular approach as practiced in the field in it's entirety. To the extent that prior instruction may effect the efficacy of the treatment, the generalizability of these results may be limited. SImilarly the generalizability to other handicapped populations is unknown.

Conclusions

Two aspects of writing instruction were investigated in this study, the process of repeated writing and repeated revision, and instruction in cues for mechanics or structure. Writing fluency did not appear to be differentially affected by either the process used (repeated writing, repeated revision, or writing on different topics) or the type of cues that were taught (mechanics or structure). However, students made significant growth in general language production over the course of five writing sessions across instructional approaches.

Besides fluency, two other aspects of written language were evaluated, mechanics and structure. Regardless of the fact that students in the repeated writing and repeated revision groups had an opportunity to improve a composition on the same topic for three different sessions, they did not perform significantly better than the other groups on any of the post-test measures. However, the instruction provided in the sessions did promote differential achievement for use of complete sentences, paragraph form, and capitalization, with the mechanics group making significantly greater gains across these areas. Students instructed in structural cues and students instructed in mechanics cues all made significant gains in use of clincher sentences from pre to post-test.

In summary, LD high school students showed significant gains in several aspects of writing fluency within five instructional sessions in which they received group instruction in cues for mechanics and practiced writing for twenty minutes. The effects of instruction were not significantly enhanced by allowing students to write repeatedly on the same topic or to work on revising a composition for several sessions. Neither was instruction in structural cues (topic sentence, detail sentences, and clincher sentences) as effective across the different areas of fluency.

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APPENDIX A

Directions for All Groups

Days 1 and 2

ALL GROUPS

Introduction and Directions: Day 1

My name is ____________________ and I'm here from Penn State to help your class with writing skills. We think we have a way to help you improve your composition writing. For the next week you will have a chance to work on writing skills with us. Sometimes it may seem boring, but if you keep working hard at it, in the end I think we will be able to see how your writing has improved.

We will be working on this writing project every day for five days. Each day I will give you directions, show you a topic tape, and then you will have twenty minutes to write. That's not very long, so you will really have to concentrate during the writing period. The papers you do for us will count towards your regular grade; at the end of the five days I will give copies of all your papers to your regular English teacher, ____________________. Are there any questions?

Now I'm going to show you a short tape of some junior high kids. After it's over, you will be allowed twenty minutes to write as much as you can about it. The film may remind you of something that happened to someone else, or something that has happened to you. You may write a true story or a make-believe story. The time to stop will be written on the board, and I will tell you when you have only two minutes left. Please don't start writing until I say, "Go ahead." Are there any questions?

SHOW TOPIC TAPE ______________________________________

Okay, your have twenty minutes to write. Please put your name on the top right hand corner of your paper.

WRITE STOP TIME ON BOARD

TELL STUDENTS THAT "you should be finished up your story now because there's only two minutes left for writing."

ASK STUDENTS TO PASS THEIR PAPERS FORWARD WHEN THE TIME IS UP. Say, "Thanks for writing today, we'll see you again on Monday."

ALL GROUPS

Directions: Day 2

Today we have a short videotape that will teach you about three steps to follow that can improve your compositions. Listen carefully to the tape because after it's over I will ask each of you to tell me the three steps.

SHOW INSTRUCTION TAPE

PASS OUT HAND-OUT	This handout lists and explains the three steps than you learned about on the tape today. Please put your name on it. You should keep it with you when you write today to help remind you to use the three steps. Please give it back to me with your composition at the end of the period. Now, follow along as I read it over with you. (Read it aloud to students.)
ORAL QUIZ	You will each have a chance to say the three steps when I point to you. Please say them in order as quickly as you can. After everyone has had a turn, then I will call on you to explain one of the steps. If you can't remember, it's okay to look at your handout. (MAKE THIS FAST-PACED AND FUN!!! EVERYONE SHOULD BE CALLED ON AT LEAST ONCE; DO IT FOR 2-5 MINUTES.)
REP WR & REP REV:	(Groups may be together or separated for this activity, depending on group size and student attention and behavior.)

Now we're going to see another topic tape like we did Friday, and then you will have twenty minutes to write about it. Remember, the tape isn't intended to tell a whole story, but rather to help you express your opinion about a topic or recall a specific experience that you or someone else had. Once you get started on your composition you may change events so they don't agree with the video.

PASS OUT PAPER	Please take at least two sheets and write your name and the date on the top right hand corner of your paper.
SHOW TOPIC TAPES	(At end of the topic tape, write stop time on board. Remind students when they only have two minutes left to finish up their composition. When the time is up, please ask students to pass their compositions and handouts forward.)

APPENDIX B

Directions for Each Experimental Group

Days 3 and 4

STRUCTURAL: REPEATED REVISION

Directions: Day 3-4

Today I have another short tape to show you then I will demonstrate some ways to use the three steps to improve your writing. After the videotape, I will pass back your papers from yesterday, and we will discuss ways to improve them when you write today.

SHOW INSTRUCTION TAPE (Structural)

ORAL QUIZ: You will each have a chance to say the three steps when I point to you. Please say them in order as quickly as you can. After everyone has had a turn, then I will call on you to explain one of the steps. If you can't remember, it's okay to look at your handout. (MAKE THIS FAST-PACED AND FUN!!! EVERYONE SHOULD BE CALLED ON AT LEAST ONCE; DO IT FOR 2-5 MINUTES.)

FEEDBACK: Pass out yesterday's compositions, scoresheets, and handouts. Review the NOTES with individuals while they wait for their topic tape or after they start writing.

Now we're going to see the film that you saw yesterday again, and then you'll have a chance to improve the composition you wrote yesterday by using the cues you've learned or making it longer. Try to improve your paper in as many ways as you can.

When you make changes draw line through the old words rather than erasing. After you finish revising your story you should copy it onto a new piece of paper. The time to stop will be written on the board, and the teacher will tell you when you have only two minutes left. Please don't start writing until I say, "Go ahead." Are there any questions.

PASS OUT PAPER	Please take at least two sheest and write your name and the date on the top right hand corner of your paper.
SHOW TOPIC TAPES	(At end of the topic tape, write stop time on board. Remind students when they only have two minutes left to finish up their composition. When the time is up please ask students to pass their compositions and handouts forward.)

STRUCTURAL: REPEATED WRITING

Directions: Day 3-4

Today we have another short tape to show you that will demonstrate some ways to use the three steps to improve your writing. After the videotape, we will pass back your papers from yesterday, and discuss ways to improve them when you write today.

SHOW INSTRUCTION TAPE (Structural)

ORAL QUIZ: You will each have a chance to say the three steps when I point to you. Please say them in order as quickly as you can. After everyone has had a turn, they I will call on you to explain one of the steps. If you can't remember, it's okay to look at your handout. (MAKE THIS FAST-PACED AND FUN!!! EVERYONE SHOULD BE CALLED ON AT LEAST ONCE.)

FEEDBACK: Pass out yesterday's compositions, scoresheets, and handouts. Review the NOTES. Review individual comments while students wait to see their topic tape or after they start writing.

COLLECT PREVIOUS DAY'S COMPOSITIONS

Today, we're going to see the same film that you saw yesterday, again, and then you'll have a chance to write another composition even better than the last one, by using the cues you have learned or making it longer. Try to improve your paper in as many ways as you can. The time to stop will be written on the board, and the teacher will tell you when you have only two minutes left. Please don't start writing until I say, "Go ahead." Are there any questions.

PASS OUT PAPER	Please take at least two sheets and write your name and the date on the top right hand corner of your paper.
SHOW TOPIC TAPES	(At end of the topic tape, write stop time on board. Remind students when they only have two minutes left to finish up their composition. When the time is up please ask students to pass their compositions and handouts forward.)

STRUCTURAL: DIFFERENT TOPICS

Directions: Day 3-4

Today we have another short tape to show you than will demonstrate some ways to use the three steps to improve your writing. After the videotape, we will pass back your papers from yesterday, and then discuss ways to improve them when you write today.

SHOW INSTRUCTION TAPE (Structural)

ORAL QUIZ: You will each have a chance to say the three steps when I point to you. Please say them in order as quickly as you can. After everyone has had a turn, then I will call on you to explain one of the steps. If you can't remember, it's okay to look at your handout.
(MAKE THIS FAST-PACED AND FUN!!! EVERYONE SHOULD BE CALLED ON AT LEAST ONCE: DO IT FOR 2-5 MINUTES.)

FEEDBACK: Pass out yesterday's compositions, scoresheets, and handouts. Review the NOTES. Review individual feedback when the writing period starts.

Now I'll show you a topic tape and then you'll have a chance to write a different composition even better than the last one, by using the cues you have learned or making it longer. Try to improve your paper in as many ways as you can. The time to stop will be written on the board, and the teacher will tell you when you have only two minutes left. Please don't start writing until I say, "Go ahead."

PASS OUT PAPER Please take at least two sheets and write your name and the data on the top right hand corner.

SHOW TOPIC TAPES (At end of the topic tape, write stop time on board. Remind students when they only have two minutes left to finish up their composition. When the time is up please ask students to pass their compositions and handouts forward.)

MECHANICS: DIFFERENT TOPICS

Directions: Day 3-4

Today I have another short tape to show you that will demonstrate some ways to use the three steps to improve your writing. After the videotape, I will pass back your papers from yesterday, and we will discuss ways to improve them when you write today.

SHOW INSTRUCTION TAPE (Structural)

ORAL QUIZ:	You will each have a chance to say the three steps when I point to you. Please say them in order as quickly as you can. After everyone has had a turn, then I will call on you to explain one of the steps. If you can't remember, its okay to look at your handout. (MAKE THIS FAST-PACED AND FUN!!! EVERYONE SHOULD BE CALLED ON AT LEAST ONCE: DO IT FOR 2-5 MINUTES.)
FEEDBACK:	Pass out yesterday's compositions, scoresheets, and handouts. Review the NOTES. Review individual comments after writing period starts.

Now I'll show you a topic tape and then you'll have a chance to write a differnet composition even better than the last one, but using the cues you have learned or making it longer. Try to improve your paper in as many ways as you can. The time to stop will be written on the board, and the teacher will tell you when you have only two minutes left. Please don't start writing until I say, "Go ahead." Are there any questions?

PASS OUT PAPER	Please take at least two sheets and write your name and the date on the top right hand corner of your paper.
SHOW TOPIC TAPES	(At end of the topic tape, write stop time on board. Remind students when they only have two minutes left to finish up their composition. When the time is up please ask students to pass their compositions and handouts forward.)

APPENDIX C

Directions for Each Experimental Group

Day 5

STRUCTURAL: REPEATED REVISION

Directions: Day 5

Today I have another short tape to show you that will demonstrate some ways to use the three steps to improve your writing. After the videotape, I will pass back your papers from yesterday, and we will discuss ways to improve them when you write today. Pay close attention to the tape today, because when it's over, I will quiz you individually on the steps, and also you won't be allowed to use your handout when you write.

SHOW INSTRUCTION TAPE (Structural)

(PASS OUT FEEDBACK FORMS)

ORAL QUIZ Now, while you review your feedback forms I will quiz you individually on the three steps. (Ask each person to tell what the three steps are, then ask what they must remember about each step. Check off their name if all are correct; record any errors.)

FEEDBACK: Pass out yesterday's compositions and scoresheets. Review the COMMENTS. Review individual feedback.

Now we're going to see the film that you have been viewing all week for the last time. This will be your last chance to improve the composition you've been revising by using the cues you've learned or making it longer. Try to improve your paper in as many ways as you can. We will base our final evaluation of your work this week on the paper you turn in today, so please do your best.

Remember, when you make changes draw a line through the old words rather than erasing. After you finish revising your story, you should copy it onto a new piece of paper. The time to stop will be written on the board, and the teacher will tell you when you have only two minutes left. Please don't start writing until I say, "Go ahead." Are there any questions?

PASS OUT PAPER	Please take at lease two sheets and write your name and the date on the top right hand corner of your paper.
SHOW TOPIC TAPES	(At end of the topic tape, write stop time on board. Remind students when they only have two minutes left to finish up their composition. When the time is up please ask students to pass their compositions and handouts forward.)

STRUCTURAL: REPEATED WRITING

Directions: Day 5

Pay close attention to the tape today, because when it's over, I will quiz you individually on the steps, and also you won't be allowed to use your handout when you write.

SHOW INSTRUCTION TAPE (Structural)

(PASS OUT FEEDBACK FORMS)

ORAL QUIZ Now, while you review your feedback forms I will quiz you individually on the three steps. (Ask each person to tell what the three steps are, then ask what they must remember about each step. Check off their name if all are correct; record any errors.)

FEEDBACK: Pass out yesterday's compositions and score-sheets. Review the COMMENTS. Review HOW TO INCREASE FLUENCY USING THE STEPS.

COLLECT PREVIOUS DAY'S COMPOSITIONS

Now we're going to see the film that you have been viewing all week for the last time. This will be your last chance to improve the composition you've been revising by using the cues you've learned or making it longer. Try to improve your paper in as many ways as you can. We will base our final evaluation of your work this week on the paper you turn in today, so please do your best.

The time to stop will be written on the board, and the teacher will tell you when you have only two minutes left. Please don't start writing until I say, "Go ahead." Are there any questions?

PASS OUT PAPER Please take at least two sheets and write your name and the date on the top right hand corner of your paper.

SHOW TOPIC TAPES	(At end of the topic tape, write stop time on board. Remind students when they only have two minutes left to finish up their composition. When the time is up, please ask students to pass their compositions and handouts forward.)

STRUCTURAL: DIFFERENT TOPICS

Directions: Day 5

Today we have one last, short tape to show you that will demonstrate some ways to use the three steps to improve your writing. After the videotape, we will pass back your papers from yesterday, and then discuss ways to improve them when you write today. Pay close attention to the tape today, because when it's over, I will quiz you individually on the steps, and also you won't be allowed to use your handout when you write.

SHOW INSTRUCTION TAPE (Structural)

(PASS OUT FEEDBACK FORMS)

ORAL QUIZ	Now, while you review your feedback forms, I quiz you individually on the three steps. (Ask each person to tell what the three steps are, then ask what they must remember about each step. Check off their name if all are correct; record any errors.)
FEEDBACK:	Pass out yesterday's compositions and scoresheets. Review the COMMENTS.

Now I'll show you the last topic tape and then you'll have a chance to write a different composition even better than the last one, by using the cues you have learned or making it longer. Try to improve your paper in as many ways as you can. We will base our final evaluation of your work this week on the paper you turn in today, so please do your best. The time to stop will be written on the board, and the teacher will tell you when you have only two minutes left. Please don't start writing until I say, "Go ahead."

PASS OUT PAPER	Please take at least two sheets and write your name and the date on the top right hand corner of your paper.

SHOW TOPIC TAPE (At end of the topic tape, write stop time on board. Remind students when they only have two minutes left to finish up their composition. When the time is up please ask students to pass their compositions and handouts forward.)

MECHANICS: DIFFERENT TOPICS

Directions: Day 5

Today we have one last, short tape to show you that will demonstrate some ways to use the three steps to improve your writing. After the videotape, we will pass back your papers from yesterday, and then discuss ways to improve them when you write today. Pay close attention to the tape today, because when it's over, I will quiz you individually on the steps, and also you won't be allowed to use your handout when you write.

SHOW INSTRUCTION TAPE (Mechanics)

(PASS OUT FEEDBACK FORMS)

ORAL QUIZ Now, while you review your feedback forms I will quiz you individually on the three steps. (Ask each person to tell what the three steps are, then ask what they must remember about each step. Check off their name if all are correct; record any errors.)

FEEDBACK: Pass out yesterday's compositions and scoresheets. Review the COMMENTS.

Now I'll show you the last topic tape and then you'll have a chance to write a different composition even better than the last one, by using the cues you have learned or making it longer. Try to improve your paper in as many ways as you can. We will base our final evaluation of your work this week on the paper you turn in today, so please do your best. The time to stop will be written on the board, and the teacher will tell you when you have only tow minutes left. Please don't start writing until I say, "Go ahead." Are there any questions?

PASS OUT PAPER Please take at least two sheets and write your name and the date on the top right hand corner of your paper.

SHOW TOPIC TAPES	(At end of the topic tape, write stop time on board. Remind students when they only have two minutes left to finish up their composition. When the time is up please ask students to pass their compositions and handouts forward.)

APPENDIX D

Scripts for Mechanics Cue Instruction

Session 2: Description of Cues

MECHANICS

There are three steps to remember when you write each day. They are:

1. Use complete sentences.
2. Indent and punctuate.
3. Capitalize.

Now I will explain what each one means. You don't need to take notes because the teacher will give you a handout listing the steps and how to apply them. You may keep it with you when you work today.

(The first step is)
1. Use complete sentences:
(A sentence)
- sounds complete
- has at least one subject and verb
- the subject tells who or what the sentence is about
- the verb tells what happened

(The second step is)
2. Indent and punctuate:
- indent the first word of each new paragraph.
- punctuate the end of each sentence with a period, exclamation point, or a question mark
- use quotation marks when reporting exactly what someone said
- separate three or more items on a list with commas

(The third step is)
3. Capitalize:
(You must capitalize)
- the first letter of the first word of every sentence and
- the first letter of proper nouns (names of people, places or things, example: Nancy, Philadelphia, Doritos).

Using these steps helps avoid errors that may distract the reader from what you're trying to say. Even if your ideas are good, teachers often assign low grades when there are errors in capitalization, punctuation or sentence use. Following these steps will help you correct errors yourself before the teacher sees your paper.

Now I will review the steps again and point out examples of each in this paragraph that a student wrote.

Remember, the first step is to use complete sentences, the second step is to indent and punctuate, and the third step is to capitalize.

This paragraph was written by an eighth grade student; please read it yourself as I read it aloud.

****

I like country music. I like Willie Nelson. He sings his songs very well. He is an older guy. I liked his song "You were Always on My Mind". He has very long hair. He sings with a band. Willie nelson plays a guitar. He has made millions of records.

****

Please mark the copy of the paper your teacher has given you as we go along.

WHAT IS THE FIRST STEP? (pause) The first step is to use complete sentences. Every sentence must have both a subject and a verb. Let's underline the subjects with one line and the verbs with two and then make sure each sentence is complete.

Let's start with the first sentence: I LIKE COUNTRY MUSIC. Who is the sentence about? "I" is the subject. What do I do? "Like" is the verb. Does the sentence sound complete? Yes.

Look at the next sentence. I LIKE WILLIE NELSON. Who is the sentence about? "I" is the subject. What do I do? "Like" is the verb. Does the sentence sound complete? Yes.

Look at the next sentence. HE SINGS HIS SONGS VERY WELL. Who is the sentence about? "He" is the subject and "sings" is the verb. Does the sentence sound complete? Yes.

If you were writing this paragraph, you would check all of the sentences the same way to be sure they were all complete sentences.

The second step is to indent and punctuate. The beginning of each paragraph should be indented about one word, like this.
Now we need to check to be sure that there is a period, question mark, or exclamation point at the end of each sentence. Please circle each ending punctuation mark as we check the sentences. Let's start with the next sentnece, HE IS AN OLDER GUY. Does it have a period, question mark or exclamation mark at the end? Yes, it has a period.

Let's check the next sentence for ending punctuation. I LIKED HIS SONG, "YOU ARE ALWAYS ON MY MIND." It has a period at the end. Quotation marks are used in this sentence, also. Usually quotation marks are placed around the exact words that someone said, but in this case they are put around the name of a song.

Does the next sentence have ending punctuation? HE HAS VERY LONG HAIR. Yes, a period is at the end. When you are writing, be sure to make your periods dark enough so the teacher can see them.

If this were your paragraph, you would check all the sentences for indentation and punctuation.

The third step is to capitalize. The first word of every sentence must be capitalized as well as the first letter of every name. Let's look at the next sentence. HE SINGS WITH A BAND. Is the first word capitalized? Circle it. Are there any names of things or people in this sentence? No.

Let's look at the next sentence. WILLIE NELSON PLAYS A GUITAR. Is the first word capitalized? Yes. Are there any names of things or people in this sentence? Of course, Willie Nelson. This student forgot to capitalize both his first and last names. Please correct it on your paper.

Let's check the last sentence for capitalization. HE HAS MADE MILLIONS OF RECORDS. Does it begin with a capital letter? Yes. Are there any names in this sentence? No. It says records but doesn't give the specific names of any records so no capital letters are needed.

If this were your paragraph, you would check every sentence for capitalization.

When you write today, try to follow these steps. In every paragraph check for complete sentences, indentation and punctuation, and capitalization.

Session 3: Modeling Cue 1

MECHANICS

Yesterday you learned about three steps to help you correct errors when writing paragraphs, and then you practiced using them by writing a story. Today, we're going to review the three steps and then concentrate on the first step, writing complete sentences.

Here is the beginning of a paragraph written by a student. Let's check it for examples of each of the three steps. The first step was: USE COMPLETE SENTENCES. A complete sentence has at least one subject and verb and sounds like a complete sentence.

Let's look at the first sentence in the paragraph. A PERSON I REALLY LIKE IS DAVE. Does it sound like a complete sentence? (yes) Does it have at least one subject and verb? Yes, A PERSON is the subject and IS is the verb. (underline)

What was the second step you learned? INDENT AND PUNCTUATE. Is the first word of the paragraph indented? Yes. Is there a /./, /?/, or /!/ at the end of each sentence? Yes. (cricle)

And, what was the third step you learned? CAPITALIZE. Is the first word of every sentence capitalized? (circle) Are there any proper nouns in these sentences? We must capitalize the names of people, places, or things. In this paragraph the only proper noun is DAVE. (circle)

Okay now that we have reviewed the steps, let's concentrate on step 1. What was step 1, again? yes it was, "write complete sentences." A complete sentence has both a subject and a verb. What is the definition of the subject? "It tells who or what the sentence is about." The verb "tells what the subject did."

Today I have been asked to write a paragraph about this picture. I will show you how I check for complete sentences as I write. Here is what I have written so far. Read along to yourself as I read it aloud.

****

If I won a vacation, I would go to the Bahamas. I would like to take my mom and my sisters, too I think they would have fun.

****

Do you remember what the first step is? The first step is to use complete sentences. We want to use complete sentences that have both a subject and a verb. The subject tells who or what the sentence is about and the verb tells what the subject did. Let's underline the subjects with one line and the verbs with two as we check the sentences for completeness. Please mark your paper as we go along.

Look at the first sentence. "If I won a vacation, I would go to the Bahamas." Does it sound like a complete sentence? Yes, it does. It has two parts that go together. We'll mark the second part, "I would go to the Bahamas." Who is the subject? Who is the sentence about? Underline "I" with one line. What is the verb? What would I do? Underline "would go" with two lines. This sentence sounds like a complete sentence and has at least one subject and verb so it is complete.

Look at the second sentence. I would take my mom and sisters, too I think they would have fun. Does this sound like a complete sentence? Yes, but it sounds like it should be two sentences; let's mark the first one, I WOULD TAKE MY MOM AND SISTER, TOO. Who is the sentence about? Yes, "I" is the subject. What would "I" do? "WOULD TAKE" is the verb.

What about the next sentence, "I THINK THEY WOULD HAVE FUN." Does it sound like a complete sentence? Yes, in fact this sentence has two parts, it has two subjects and two verbs. Let's underline the subject and verb in the first part, I THINK. Who is the subject? Underline what you think is the subject with one line and the verb with two lines, now. (pause). You should have underlined "I" with one line for the subject and "THINK" with two lines for the verb. As long as your sentence sounds like a complete sentence and has at least one subject and one verb then it is complete.

Now I am going to write another sentence about what we would do in the Bahamas. The subject will be "WE," so I'll start with that. Then the rest of the sentence will be "WOULD SPEND A LOT OF TIME ON THE BEACH." Does the sentence sound complete? Yes, and does it have a verb? What is it? Right, it's WILL SPEND.

I'm going to write one more sentence to end this paragraph. I think I will write, A VACATION LIKE THAT WOULD BE A DREAM. Does that sentence sound complete? Does it have a subject and a verb? What is the sentence about? Yes, the subject is A VACATION. What is the verb? The verb is WOULD BE.

When you write today remember the first step, Use Complete Sentences. For every sentence you should ask, Does it sound like a complete sentence? Does it have a subject and a verb?

Session 4: Modeling Cue 2

MECHANICS

This week you have learned three steps to follow when you write paragraphs; yesterday I demonstrated how to use step 1. Today we'll review step 1 and then I will demonstrate how to use step 2 to improve a paragraph you are writing.

What was step 1? (pause) Yes, step 1 was to use complete sentences. For every sentence you write you should ask, "Does it sound like a complete sentence?" and "does it have a subject and a verb?" Here are four sentences from a student's paragraph. Write the numbers 1-4 on your paper and then write "yes" or "no" to indicate whether each sentence is complete.

****

1. I like to go camping in the woods. 2. At my favorite place, Raystown Lake. 3. The first thing is to set up the tent. 4. Then go swimming and fishing.

****

1. (Read sentence). Does it sound like a complete sentence? Does it have a subject and verb? Who or what is the sentence about? What is the subject doing in the sentence? . . .

When you write today remember to follow the first step, USE COMPLETE SENTENCES. Now I will show you how to use the second step, also. Do you remember what the second step is? (pause) It is to indent and punctuate.

First, each time you start a new paragraph, you must indent the beginning about the length of one five letter word. Each additional paragraph should be indented exactly the same amount as the first one. Let's look at the student's paragraph in which we reviewed the sentences. Did this student indent the first word? Yes, it begins over the first letter of the second word in the second line. If another paragraph was added, the first word should be directly under "I," right here.

Except for the first word, all other lines in a paragraph should start evenly on the left side of the paper.

After you indent, you also must punctuate each sentence. Every sentence must have a period, question mark, or exclamation point at the end. Telling sentences require periods, asking sentences require question marks, and exclamatory sentences require exclamation points. You will probably use telling sentences most of the time in your paragraphs. Here are examples of the three types of sentences.

A telling sentence makes a statement and requires a period.
I WENT HOME.
I WAS LATE BECAUSE I HAD BASKETBALL PRACTICE.

An asking sentence requires an answer.
HAVE YOU EVER EATEN A CHOCOLATE COVERED GRASSHOPPER?
WHAT WOULD YOU HAVE DONE?

An exclamatory sentence is emphatic and tells something very surprising.
IT WAS SO HOT!
"THAT AMAZING HIT WON THE GAME!"

Here is the beginning of a paragraph that does not have punctuation at the end of each sentence. Put a period, question mark, or exclamation point at the end of each sentence. (pause).

****

Do you like basketball   It is one of my favorite sports as are hockey football and tennis   The most exciting game I ever saw was this winter   The game was tied with only 10 seconds left to play   A player stole the ball and made a break   But just as he shot the basket the whistle blew   Would the basket count   The officials said, "yes," and we won the game

****

Check each ending puctuation mark as we review the sentences.

What was the first part of step 2? Yes, to indent. Is this paragraph indented? Yes it is.

There are other types of punctuation you may need to use in your paragraph. If you write the exact words that someone says, you must put quotation marks around them. For example in this paragraph, THE OFFICIALS SAID YES. What did they say? YES, so the quotation marks are placed before and after YES. Quotation marks only have to be used if you include a direct statement. Often you might write an indirect statement, like THE OFFICIALS SAID THAT IT WOULD COUNT. This does not need quotation marks because it is an indirect statement. It is not EXACTLY what the officials said. Try to use direct statements and quotation marks in your paragraphs.

There is one other type of punctuation that we used in this paragraph, COMMAS. Whenever more than two things are listed they must be separated by commas. for example in this paragraph, in

The second sentence, BASKETBALL IS ONE OF MY FAVORITE SPORTS AS ARE HOCKY FOOTBALL AND TENNIS, commas should be used because I listed more than two sports. do you know where to put the commas? The commas should come after each item listed before the "and." In this sentence there should be a comma after HOCKEY, and FOOTBALL.

Today when you write, remember:

1. Use complete sentences:
   ASK: - Does it sound like a complete sentence?
   - Does it have at least one subject and verb?

2. Indent and punctuate:
   - indent the first word of each new paragraph.
   - punctuate the end of each sentence with a period, exclamation point, or a question point
   - use quotation marks when reporting exactly what someone said
   - separate three or more items on a list with commas

Now the teacher will ask you to practice saying the three steps and then give you time to practice using the steps when writing paragraphs. You may use the handout to refer to when you write.

Session 5: Modeling Cue 3

MECHANICS

This week you have learned three steps to follow when you write paragraphs. Yesterday I demonstrated how to use step 2. Today we'll review steps 1 and 2 and then I will demonstrate how to use step 3 to improve a paragraph you are writing.

What was step 1? (pause) Yes, step one was to use complete sentences. For every sentence you write you should ask, "Does it sound like a complete sentence?" and "Does it have at least one subject and verb?"

What was step 2? (pause) Yes, step two was to indent and punctuate. the first word in each paragraph must be indented and every sentence must have a period, question mark, or exclaamation mark at the end. You must also use quotation marks around direct statements and commas between items in a list. Let's review some examples of quotation mark and comma usage.

****

The little girl said, I want a cabbage patch doll a transformer and hockey skates for Christmas.

But on your list is says sneakers clothes books and a bookbag, Santa replied.

Oh, my mother and father wrote that letter! she laughed.

****

Put quotation marks around the exact words the little girl said in the first sentence . . . . You should have put them here and here, because she said, I WANT A CABBAGE PATCH DOLL A TRANSFORMER AND HOCKEY SKATES FOR CHRISTMAS.

The first sentence also needs commas because she listed more than two toys. Put commas between the items listed before the AND . . . . You should have put a comma after DOLL and TRANSFORMER.

The second sentence also needs quotation marks and commas. Put them in . . . . You should have put quotation marks here and here, because BUT ON YOUR LIST IT SAYS SNEAKERS, CLOTHES, BOOKS, AND A BOOKBAG are the exact words Santa said.

You also should have put commas after SNEAKERS, CLOTHES and BOOKS, all the items in the list before the word AND.

Place quotation marks and commas in the last sentence, if they are needed . . . . Quotation marks should be placed around OH MY MOTHER AND FATHER WROTE THAT LETTER, because they are the girl's exact words. Is there a list of things in this sentence that requires commas? No, there isn't.

When you write today remember you must enclose direct statements with quotation marks and separate a list of more than three items with commas.

Now, I am going to show you how to use step three. It's one of the easiest steps to remember. CAPITALIZE. You must capitalize the first word of every sentence. You also must capitalize names of people, places or things. And, you must NOT capitalize any other letters in the story. Sometimes when writing, it's easy to put capital letters in the middle of words, or to capitalize all the letters when printing. However, papers look better, can be read more easily, and get better grades if capital letters and small letters are used correctly.

Here are some sentences from a student's paragraph. Let's correct the capitalization. Capitalize the first word and any names in the first sentence. I WILL ALWAYS REMEMBER WHEN UNCLE JOHN SENT ME TO CAMP . . . . You should have capitalized "I" because it's the first word and "Uncle John" because it tells a person's name.

Now correct the capitalization in the second sentence. THE NAME OF THE CAMP WAS CAMP MINNEHAHA . . . . First you should have capitalized "The" because it's the first word in the sentence and then "Camp Minnehaha" because it is the name of a thing.

Now do the third sentence. I WAS ON LONG LAKE IN JOHNSTON, NEW YORK . . . . What words did you capitalize? "Long Lake" because it's the name of the lake, "Johnston," it's the name of a town, and "New York," because it's the name of a state. The names of things like lakes, towns, and states are all proper nouns.

Let's capitalize the next sentence. ONE OF THE ACTIVITIES AT CAMP WAS RIFLERY WHERE I GOT TO SHOOT A REMINGTON RIFLE. Be careful on this sentence! . . . You should have capitalized "One" because it's the first word and "Remington" because it's the name of a brand of rifle. You don't need to capitalize "riflery."

What about the last sentence? MY COUNSELOR AT CAMP, JIM, STILL SENDS ME A CARD AT CHRISTMAS . . . . You should have capitalized "My" because it's the first word, "Jim" because it's a person's name, and "Christmas" because it's the name of a holiday.

Step three, that we've been practicing today, is to Capitalize. What di you capitalize? Right, the first word in the sentence. And, capitalize all proper nouns. What are proper nouns? The names of people, places, or things.

When you write today, try to remember to use all three steps. I'll review them quickly with you, because after the tape, the teacher will give you an oral quiz to see if you can remember them. You may NOT use the handout when you write today.

1. Use complete sentences:
   ASK: -Does it sound like a complete sentence?
   -Does it have at least one subject and verb?

2. Indent and punctuate:
   - -indent the first word of each new paragraph.
   - -punctuate the end of each sentence with a period, exclamation point, or a question mark
   - -use quotation marks when reporting exactly what someone said
   - -separate three or more items on a list with commas

3. Capitalize
   - -the first letter of the first word of every sentence and
   - -the first letter of proper nouns (names of people, places, or things)

****

I will always remember when uncle john sent me to camp. the name of the camp was camp minnehaha. it was on long lake in johnstown, new york. one of the activities at the camp was riflery where i got to shoot a remington rifle. my counselor at camp, jim, still sends me a card at christmas.

****

Appendix E

Scripts for Structural Cue Instruction

Session 2: Description of Cues

STRUCTURAL

Welcome to the writing workshop. Today I am going to introduce a set of three steps that can help you write better paragraphs. Here are three steps to remember when you write each day.

1. Write a topic sentence.
2. Write detail sentences.
3. Write a clincher sentence.

Now I will explain what each one means. You don't need to take notes because the teacher will give you a handout listing the steps and how to apply them. You may keep it with you when you work today.

(The first step is)
1. TOPIC SENTENCE Every paragraph should contain a topic sentence. The topic sentence states the main idea of the paragraph. The topic sentence is usually the first sentence.

(The second step is)
2. DETAIL SENTENCE The detail sentences support or explain the topic sentence. They usually come after the topic sentence.

(the third step is)
3. CLINCHER SENTENCE The clincher sentence sums up the paragraph. It repeats the main idea of the paragraph that was stated in the topic sentence and may provide a link to the next paragraph.

Using these steps helps to organize your writing so readers (including the teacher) can understand it more easily. Using these steps when writing answers to social studies or science questions will make your answers easier to follow. When writing stories, the steps will help you decide what to write next in order to explain what happened more clearly. In other words, improving the organization of your writing can improve your grades in many subjects.

Now I will review steps again and point out an example of each in a paragraph that a student wrote.

The first step is WRITE A TOPIC SENTENCE, the second is WRITE DETAIL SENTENCES, and the third is WRITE A CLINCHER SENTENCE.

Try to find the topic sentence in this paragraph written by an eighth grader as I read it. Remember the topic sentence tells the main ideas. It explains what the whole paragraph is about. It is usually the first sentence.
(Read paragraph aloud.)

****

A person I really like is Dave. He is a real nice guy. He teaches me stuff about a car. He is easy to get along with. He is a good mechanic. He taught me how to pull an engine. He taught me how to fix brakes. He is teaching me how to rebuild an engine. One important thing about rebuilding an engine is you got to clean all the parts. Dave is a fine person to work with and a very good teacher.

****

Please mark the paper your teacher gave you as we go along.

What do you think is the topic sentence of this paragraph? Yes, the topic sentence is the first sentence, "A person I really like is Dave." The rest of the paragraph is about why I like Dave.

Do you remember what the second step in writing a paragraph is? (Pause) The second step is to write detail sentences. The detail sentences should explain more about the topic. "Dave is a real nice guy," is the first detail sentence in this paragraph. It tells one reason why "I really like Dave."

What is the next detail sentence? (Pause) Yes, the next detail sentence is "He teaches me stuff about a car." It tells another reason why "I like Dave." Write down how many detail sentences you think there are altogether in this paragraph. (Pause) Did you find one sentence that doesn't fit the topic? Let's number and check the sentences to find the one detail that doesn't fit the topic.

We already checked (1 and 2). The next sentence is "He is easy to get along with." Does that explain "Why I like Dave?" Yes, we'll number it 3.

The next sentence is "He taught me how to "pull an engine." Does that explain "Why I like Dave?" Yes, we'll number it 4.

The next sentence is "He taught me how to fix brakes." Does that explain "Why I like Dave?" Yes, we'll number it 5.

The next sentence is "He is teaching me to rebuild an engine. Does that explain "Why I like Dave?" Yes, we'll number it 6.

The next sentence is "One important thing about rebuilding an engine is you got to clean all the parts." Does that explain "Why I like Dave?" THINK! Does this sentence tell about the topic sentence WHY I LIKE DAVE? No, it doesn't Let's cross this sentence out. Without this sentence there are six detail sentences.

The last step in writing a paragraph is to write a clincher sentence. The clincher sentence sums up the paragraph. This student wrote a very good clincher sentence, "Dave is a fine person to work with and a very good teacher." That is what the whole paragraph was about.

When you write today try to follow these steps. Every paragraph you write should have a topic sentence, detail sentences, and a clincher sentence.

Now the teacher will ask you to practice saying the three steps and then give you a handout that lists them for you to refer to when you write.

Session 3: Modeling Cue No. 1

STRUCTURAL

Yesterday you learned about three steps to help you organize material when you write paragraphs, and then you practiced using the steps by writing a story. Today, we're going to review the three steps and then concentrate on the first step, writing topic sentences.

Here is a paragraph written by a student; let's check it for examples of each of the three steps.

What was step 1? Yes, the first step was to write a topic sentence. Remember, a topic sentence tells the main idea. It explains what the whole paragraph is about. And, it is usually the first sentence. Find the topic sentence in this paragraph that a student wrote as I read it aloud.

****

I will always remember when Uncle John sent me to camp. The name of the camp was Camp Minnehaha. It was on Long Lake in Johnstown, New York. One of the activities at camp was riflery, where I got to shoot a Remington rifle. My counselor at camp, Jim, still sends me a card at Christmas.

****

Yes, the topic sentence is "I will always remember when Uncle John sent me to camp." Everything else in the paragraph is related to remembering camp.

Please mark your copy of the paragraph as we go along. Do you remember the second step that you learned yesterday? The second step was to write detail sentences. The detail sentences support or explain the topic sentence. They usually come after the topic sentence. How many detail sentences are in this paragraph? Let's count them. "The name of the camp was Camp Minnehaha . . . . All three of these detail sentences describe the student's camp experience.

Now there is one sentence left, do you remember what it's called? The last sentence in the paragraph sums up the main idea and may lead into the next paragraph. It's called the clincher sentence. In this paragraph, it's "My counselor, Jim, still sends me a card at Christmas." The clincher sentence refers back to the main idea of always remembering camp by giving an example of how his coulselor still writes to him every Christmas.

Now that we've reviewed the three steps, I'm going to show you how I use the first step when I write a paragraph. Today I have been asked to write a paragraph about this picture. I will show you how I decide what to write for a topic sentence by thinking aloud. I don't usually do this in class, because everyone might laugh at me. But, I sometimes do it at home when I can't think of what to write.

Okay, how should I start this paragraph? Let's see, the picture is of people on a beach. It looks like they are somewhere in the tropics. I have never been anywhere like that, and probably I never will be unless I win a contest or something. Hey, that's a good idea. I think I'll write about what I would do if I won a contest. I'd go someplace really warm like that . . . let's see I should say where . . . how about the Bahamas? Okay, so my topic sentence is going to be:

****

If a won a vacation, I would go to the Bahamas.

****

Then, the rest of the paragraph could be about what I would do there, or who I'd take with me, or what the Bahamas might be like.

Okay, let's try another picture. This picture is of a lake. It reminds me of a place called Raystown Lake where I went camping with the Girl Scouts once. We set up tents in the woods. I really like camping. I think I'll write about that. Okay, my topic sentence will be:

****

I like to go camping in the woods at my favorite place, Raystown Lake.

****

Then, the rest of the paragraph could be about what I like about camping or the place in the woods where we camped at Raystown or the time we got scared because we heard something crashing around in the woods right behind our tent.

Now the teacher will practice saying the steps with you and then you will have a chance to practice using them by writing a story. When you write today, remember to include a topic sentence in each paragraph. The topic sentence should state the main idea and is usually one of the first sentences.

Session 4: Modeling Cue No. 2

STRUCTURAL

This week you have learned three steps to follow when you write paragraphs. Yesterday I demonstrated how to use step 1. Today we'll review step 1 and then I will demonstrate how to use step 2 to improve a paragraph you are writing.

What was step 1? Yes, step 1 was to start each paragraph with a topic sentence. The topic sentence tells the main idea of the paragraph and is usually the first sentence. Here is a paragraph a student wrote that doesn't have a topic sentence. As I read the paragraph to you, try to think of a good topic sentence for it.

****

He sings his songs very well. He is an older guy. I liked his song, "You Were Always on My Mind." He has very long hair. He sings with a band. Willie Nelson plays a guitar. He has made millions of records.

****

What do you think is the main idea of this paragraph? Who/what is it about? Yes, it's about Willie Nelson. The paragraph describes him and explains a little about his music. So we know the topic sentence is going to be about Willie Nelson and his music. But how do we know exactly what to say? Let's look at the clincher sentence for a clue. The clincher sentence says that Willie Nelson has made millions of records. Hmmmm . . . it sounds to me like the student who wrote this was saying that not only does he like Willie Nelson but so do many other people . . . A good word for this is popular. And, I think I'll make this "country" music, because that's the kind of music for which he's famous. Perhaps then, a good topic sentence would be, "WILLIE NELSON IS A VERY POPULAR COUNTRY MUSIC STAR."

Now that we have reviewed step 1, I am going to show you how I use step 2 when I write a paragraph. do you remember what step 2 is? Read it with me, WRITE DETAIL SENTENCES. Detail sentences explain more about the topic or describe what happened in a paragraph in a logical order. Detail sentences should be interesting to the reader. Using descriptive words and explaining what happened in an exciting way can help make your paragraphs interesting as well as understandable.

Yesterday we wrote a topic sentence for a paragraph about this picture of people on the beach. Now we need to write detail sentences to explain the main idea. The topic sentence was "IF I WON A VACATION I WOULD GO TO THE BAHAMAS. The detail sentences will tell more about my vacation, like "who would I take with me? what would we do in the Bahamas? where would we stay?" I think I'll start with whom I would choose to go with me. Then I'll tell about what we would do. Let's see . . . I could also tell about where we would stay, because when they advertise contests and vacations they always show a hotel right on the beach.

****

If I won a vacation, I would go to the Bahamas. I would like to take my mom and my sisters, too. I think they would have fun. We would swim, eat in restaurants, and go shopping. We would stay in a big hotel overlooking the beach.

****

Well, those detail sentences are okay because they are all related to the topic sentence. But maybe I could make them more interesting by adding describing words. Here, I could add YOUNGER. And, here, I could make the sentence more specific by putting I THINK WE WOULD HAVE FUN EXPLORING A TROPICAL ISLAND. Now of this sentence, how about WE WOULD SWIM IN THE WARM SURF, EAT IN FANCY RESTAURANTS, AND GO SHOPPING. Now my paragraph gives the reader a clearer picture of what my vacation would be like and is more interesting to read.

Let's try another one. The topic sentence we wrote for this picture is I LIKE TO GO CAMPING IN THE WOODS AT MY FAVORITE PLACE, RAYSTOWN LAKE. What should I write about camping in the rest of the paragraph? I really want to tell about some of the funny things that happen when we camp at Raystown. I think I'll tell what we usually do when we go camping there and then end with a funny experience we had. Okay,

THE FIRST THING IS TO SET UP THE TENT. THEN I GO SWIMMING OR FISHING WITH SOME FRIENDS. LAST TIME WHEN I CAME BACK FROM SWIMMING I COULDN'T FIND MY TENT. IT WAS GONE! ALL MY CLOTHES WERE GONE WITH IT! MY SISTER WAS PLAYING A TRICK ON ME.

Do I need further explanation in any of those detail sentences? It seems like an important part of the story was losing my clothes and tent. So, perhaps I should explain how I put the tent together and emphasize that I put my clothes inside. I could add, A TEN STEP PROCESS THAT TAKES ABOUT HALF AN HOUR. AFTER THE TENT IS ASSEMBLED I STOW ALL MY GEAR INSIDE IT.

When you write today, remember to:

1. WRITE A TOPIC SENTENCE

The topic sentence should state the main idea of the paragraph.

2. WRITE DETAIL SENTENCES

The detail sentences should support the topic sentence of the paragraph. They explain the topic by describing specific features or actions. Good detail sentences help the reader understand EXACTLY what you're trying to say by putting your ideas in order and using carefully selected, descriptive words.

Now the teacher will ask you to practice saying the three steps and then give you time to practice using the steps when writing paragraphs. You may use the handout to refer to when you write.

Session 5: Modeling Cue No. 3

STRUCTURAL

This week you have learned three steps to follow when you write paragraphs. Yesterday I demonstrated how to use step 2 and then you practiced using steps 1 and 2 when you wrote a story. Today we'll review step 2 and then I will demonstrate how to use step 3 to improve a paragraph you are writing. Please pay careful attention to the tape because you will not be allowed to use a handout when you write today.

First, let's review steps 1 and 2. What is the first step? Yes, it is, WRITE A TOPIC SENTENCE. Remember, the topic sentence tells what the paragraph is about. And, what is the second step? Yes, the second step is to WRITE DETAIL SENTENCES. The detail sentences explain or describe. Now, let's see if you can identify the three steps in this paragraph.

****

Do you like basketball? It is one of my favorite sports as are hockey, football, and tennis. The most exciting game I ever saw was this winter. The game was tied with only ten seconds left to play. A player stole the ball and made a break. But just as he shot the basket the whistle blew! Would the basket count? The officials said, "Yes," and we won the game!

****

What is the topic sentence? Remember, the topic sentence tells the most important idea in the paragraph, and is not always the first sentence. . . . The topic of this paragraph is a basketball match that was won in the last ten seconds of the game. So, the topic sentence is the third sentence . . . THE MOST EXCITING GAME I EVER SAW WAS THIS WINTER.

The detail sentences explain or describe the main idea. For example, in this paragraph, the detail sentences describe, in order, what happened at "the most exciting game I ever saw." First, the game was tied. Then a player stole the ball. Then he shot and the whistle blew. And finally, the officials announced that our team had won! Notice that the detail sentences don't retell everything about the game. They just tell about the last ten seconds because that is the most important part of the paragraph.

Now today we're going to learn about step 3 - write a clincher sentence. The clincher sentence sums up the paragraph. It states the conclusion or restates the main idea. It also may provide a link to the next paragraph. Let's look at the paragraph about the Bahamas for which we wrote detail sentences yesterday. Read along with me while I read aloud what we have written so far.

****

If I won a vacation, I would go to the Bahamas. I would like to take my mom and younger sisters, too. I think we would have fun exploring a tropical island. We would swim in the warm surf, eat in fancy restaurants, and go shopping. We would stay in a big hotel overlooking the beach.

****

What would be a good clincher sentence for this paragraph? Remember, the clincher sentence sums up the paragraph or restates the main idea. I think I'll write a few key words in the margin to help me formulate a clincher sentence.

What was the main idea in this paragraph? Right, the paragraph was about a vacation - so I'll write the word "vacation" up here. I doubt I'll ever have a vactation like that, except for maybe in a dream! I think I'll write down the words, "tropical" and "dream," too. Now, how can I combine the key ideas into a clincher sentence? I think I'll write, "A vacation like that would be a dream!"

Now let's look at the second paragraph for which we wrote detail sentences, yesterday. Read along with me as I read what we have written so far about camping.

****

I like to go camping in the woods at my favorite place, Raystown Lake. the first thing I do is set up the tent, a ten step process that takes about half an hour. After the tent is assembled I stow all my gear inside it. Then I go swimming or fishing with my friends. Last time when I came back from swimming I couldn't find my tent. It was gone! All my clothes were gone with it! My sister was playing a trick on me.

****

What would be a good clincher sentence for this paragraph? Let's make some notes in the margins, again. Let's see, the paragraph is all about camping, so I will write "camping" in the margin. Also, this paragraph is specifically about why camping is fun, because something unexpected always happens. So I'll write "fun" and "unexpected," too. Now, how could I combine those key words into a clincher sentence? I think I'll write, "Camping is fun because I never know what to expect."

When you write today, try to improve your writing by using all three steps we've learned about: write a topic sentence, write detail sentences, and include a good clincher sentence in each paragraph. Remember, the clincher sentence restates the main idea of the paragraph, summarizes what has happened in the paragraph, or links the paragraph to the next paragraph in the story. Writing key words in the margin may help you to formulate a good clincher sentence for your paragraph.

After the tape, the teacher will give you an oral quiz to see if you remember the three steps. You may NOT use the handout when you write today.

APPENDIX F

Monitoring Forms and Guidelines for Feedback on Use of Mechanics and Structural Cues

FEEDBACK

1. Praise for the stop the student has applied the BEST.

    (EX) MECH Good use of capital letters at the beginning of sentences (100%)!

    (EX) STRUCT Good topic sentence, it tells clearly what the paragraph will be about.

2. Correction for WORST mistake. (If there are many, choose step one, or the step that was taught on videotape that day.)

    (EX) MECH In the third sentence, separate the items on on a list of more than two things with commas: "roast beef, salami, and cheese."

    (EX) STRUCT The detail sentences in the second paragraph don't tell enough about the topic (Sam). They should explain:
    - what Sam looked like
    - what kind of person Sam was
    - why Sam got into this mess

3. Encouragement based on the group assignment and increasing fluency.

    (EX) MECH Tomorrow when you start fresh on a new topic, be sure to remember to use commas for lists of more than two things.

    (EX) STRUCT: DIFF TOPICS Tomorrow when you start fresh on a new topic, be sure to include as much information as possible in your detail sentences.

    (EX) STRUCT: REP WRITING Tomorrow when you write about this topic again, try to include more information in your detail sentences.

    (EX) STRUCT: REP REVISION Tomorrow when you revise your paper, add more descriptive words and phrases to your detail sentences.

****

"NO NO's"

MECH: DON'T COMMENT ON THE CONTENT OR IDEAS IN THE PAPER!

STRUCT: DON'T COMMENT ON THE MECHANICS (PUNCTUATION, CAPITALIZATION, INDENTATION). (However, there is one exception, when scoring sentneces, you may insert missing periods to indicate the end of a TOPIC, DETAIL, or CLINCHER sentence. Circle the inserted mark, BUT DON'T MENTION IT IN COMMENTS!)

STUDENT ______________________________
TEACHER ______________________________
INSTRUCTIONAL GROUP ______________________

MECHANICS CUES

Number Correct/Instances

	DAY 2	DAY 3	DAY 4	DAY 5
1. COMPLETE SENTENCES -subject and verb				
2. INDENT AND PUNCTUATE -indent paragraphs				
-sentence endings				
-quotation marks				
-commas in lists				
3. CAPITALIZATION -sentence beginnings				
-proper nouns				
4. TOTAL WORDS				

COMMENTS:

DAY 2

DAY 3

DAY4

STUDENT ____________________
TEACHER ____________________
INSTRUCTIONAL GROUP ____________________

STRUCTURAL CUES

	Present				Length (words)			
	DAY 2	3	4	5	DAY 2	3	4	5
PARAGRAPH I								
1. Topic Sentence								
2. Detail Sentences								
3. Clincher Sentence								
PARAGRAPH II								
1. Topic Sentence								
2. Detail Sentences								
3. Clincher Sentence								

ADDITIONAL PARAGRAPHS (attached)

COMMENTS:

DAY 2

DAY 3

DAY 4

APPENDIX G

Reliability Measures

Table A.1

Proportion of teacher statements in agreement with experimental conditions for randomly selected sessions

		Mechanics	Diff. Topics	Rep. Writing	Rep. Rev.
Session	1*	1.00	1.00	1.00	1.00
	1*	1.00	1.00	1.00	1.00
	2	--	--	--	1.00
	2	--	--	--	.98
	3	--	--	1.00	--
	4	--	--	.99	--
	4	--	--	--	1.00
	4	1.00	--	--	--
	4	--	--	--	.98
	5	--	--	1.00	--
	5	.99	--	--	--
	5	--	.97	--	--
	5	.99	--	--	--
Group Mean		.99	.98	1.00	.99

*Students were not separated by experimental groups for Session 1.

Table A-2

Proportion of statements in agreement with prescribed experimental conditions for five randomly selected feedback sheets per group

Feedback Sheet	Mechanics	Diff. Topics	Rep. Writing	Rep. Rev.
a	1.00	.97	.99	1.00
b	1.00	.96	.96	1.00
c	.98	1.00	.98	.96
d	.99	.99	.94	.98
e	.99	.98	.97	.97
Average	.99	.98	.97	.98